CALIFORNIA
Water Boards

GAVIN NEWSOM
GOVERNOR

JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

RECEIVED
May 28, 2019
Commission on
State Mandates

May 28, 2019

VIA DROP BOX

Heather Halsey
Executive Director
Commission on State Mandates
980 Ninth Street, Suite 300
Sacramento, CA 95814

RE: Transmittal of Santa Ana Water Board and State Water Resources Control Board Administrative Records
Water Code Section 13383(a) Phase I MS4 Trash Order Issued to the Cities of Brea, Cypress, Huntington Beach, Newport Beach, Orange, Seal Beach, Anaheim, Chino Hills, Costa Mesa, Garden Grove, Laguna Woods, Lake Forest, San Jacinto, Santa Ana, Tustin, Villa Park, and Yorba Linda, the County of Orange, and the Cities of Grand Terrace, Irvine, Placentia, and Rialto, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017 [17-TC-07 to 17-TC-28]

Dear Ms. Halsey:

On September 27, 2018, the Commission notified the Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) and the State Water Resources Control Board (State Water Board) (collectively, Water Boards) and other interested parties that the test claim for Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Brea, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-07 submitted by the City of Brea was deemed complete. Then, on October 25 and 26, 2018, the Commission notified the Water Boards and other interested parties that seventeen similar test claims filed by the Cities of Cypress, Huntington Beach, Newport Beach, Orange, Seal Beach, Anaheim, Chino Hills, Costa Mesa, Garden Grove, Laguna Woods, Lake Forest, San Jacinto, Santa Ana, Tustin, Villa Park, and Yorba Linda, and the County of Orange (17-TC-08 to 17-TC-24) were deemed complete. Finally, on November 29, 2018, the Commission notified the Water Boards and other interested parties that four more test claims related to the Santa Ana Water Board Trash Orders filed by the Cities of Grand Terrace, Irvine, Placentia, and Rialto (17-TC-25 to 17-TC-28) were deemed complete.

In the Commission's Notices of Complete Test Claim for the respective test claims, the Water Boards were required to submit the official administrative records by the specified deadline. Following several approved extensions of time, the Water Boards were required to submit administrative records by March 29, 2019. The Water Boards submitted the administrative records on March 29, 2019. However, the Commission notified the Water Boards twice that the administrative records were not fully searchable and required the Water Boards to resubmit the administrative records. The current deadline for the Water Boards to resubmit the administrative

records is May 28, 2019. Transmitted with this letter are (1) the Santa Ana Water Board Section 13383 Trash Orders Administrative Record, (2) the State Water Board Section 13383 Investigative Orders Administrative Record, and (3) the State Water Board Trash Amendments Administrative Record.[1]

If you have any questions, please contact me at (916) 351-5174 or by email at teresita.sablan@waterboards.com.

Sincerely,

Teresita J. Sablan
Attorney III

Attachments:

(1) Santa Ana Water Board Section 13383 Trash Orders Administrative Record
(2) State Water Board Section 13383 Investigative Orders Administrative Record
(3) State Water Board Trash Amendments Administrative Record

cc: Service List via Commission Drop Box

[1] The administrative record for the Trash Amendments was originally prepared for submission to the Office of Administrative Law and modified for submission to the Commission.

ADMINISTRATIVE RECORD

Regional Water Quality Control Board, Santa Ana Region

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to the Cities of Brea, Cypress, Huntington Beach, Newport Beach, Orange, Seal Beach, Anaheim, Chino Hills, Costa Mesa, Garden Grove, Laguna Woods, Lake Forest, San Jacinto, Santa Ana, Tustin, Villa Park, and Yorba Linda, the County of Orange, and the Cities of Grand Terrace, Irvine, Placentia, and Rialto, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

17-TC-07 to 17-TC-28

ADMINISTRATIVE RECORD

Regional Water Quality Control Board, Santa Ana Region

Water Code Section 13383(a) Phase I MS4 Trash Orders, Effective June 2, 2017

Document No.	Date	Title	Page
		Orange County	
1	July 13, 1990	Waste Discharge Requirements for the County of Orange et al., Order No. 90-71	1
2	March 8, 1996	Waste Discharge Requirements for the County of Orange et al., Order No. 96-31	45
3	January 18, 2002	Waste Discharge Requirements for the County of Orange et al., Order No. R8-2002-0010	83
4	May 22, 2009	Waste Discharge Requirements for the County of Orange et al., Order No. R8-2009-0030, as amended by Order No. R8-2010-0062	163
5	October 29, 2010	Order No. R8-2010-0062, amending Waste Discharge Requirements for the County of Orange et al., Order No. R8-2009-0030	286
6	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Anaheim	290
7	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Brea	303
8	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Buena Park	316
9	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Costa Mesa	329
10	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the County of Orange	342
11	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Cypress	355
12	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Fountain Valley	368
13	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Fullerton	381
14	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Garden Grove	394
15	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Huntington Beach	407
16	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Irvine	420
17	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of La Habra	433

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18	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of La Palma	446
19	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Laguna Hills	459
20	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Laguna Woods	472
21	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Lake Forest	485
22	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Los Alamitos	498
23	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Newport Beach	511
24	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Orange	524
25	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Placentia	537
26	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Santa Ana	550
27	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Seal Beach	563
28	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Stanton	576
29	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Tustin	589
30	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Villa Park	602
31	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Westminster	615
32	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Yorba Linda	628
	Riverside County		
33	July 13, 1990	Waste Discharge Requirements for Riverside County Flood Control & Water Conservation Dist. et al., Order No. 90-104	641
34	March 8, 1996	Waste Discharge Requirements for Riverside County Flood Control & Water Conservation Dist. et al., Order No. 96-30	688
35	October 25, 2002	Waste Discharge Requirements for Riverside County Flood Control & Water Conservation Dist. et al., Order No. 2002-0011	722

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36	January 29, 2010	Waste Discharge Requirements for Riverside County Flood Control & Water Conservation Dist. et al., Order No. 2010-0033	835
37	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Beaumont	1069
38	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Calimesa	1083
39	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Canyon Lake	1097
40	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Corona	1111
41	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Eastvale	1125
42	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Hemet	1139
43	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Jurupa Valley	1153
44	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Lake Elsinore	1167
45	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Menifee	1181
46	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Moreno Valley	1195
47	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Norco	1209
48	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Perris	1223
49	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the County of Riverside	1237
50	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Riverside	1251
51	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of San Jacinto	1265
	San Bernardino County		
52	October 19, 1990	Waste Discharge Requirements for San Bernardino County Transportation/Flood Control Dept. et al., Order No. 90-136	1279
53	March 8, 1996	Waste Discharge Requirements for San Bernardino County Transportation/Flood Control Dept. et al., Order No. 96-32	1335

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54	April 26, 2002	Waste Discharge Requirements for San Bernardino County Flood Control Dist. et al., Order No. R8-2002-0012	1368
55	January 29, 2010	Waste Discharge Requirements for San Bernardino County Flood Control Dist. et al., Order No. R8-2010-0036	1458
56	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Big Bear Lake	1656
57	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Chino Hills	1670
58	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Chino	1684
59	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Colton	1698
60	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the San Bernardino County Flood Control District	1712
61	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the County of San Bernardino	1726
62	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Fontana	1740
63	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Grand Terrace	1754
64	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Highland	1768
65	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Loma Linda	1782
66	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Montclair	1796
67	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Ontario	1810
68	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Rancho Cucamonga	1824
69	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Redlands	1838
70	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Rialto	1852
71	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of San Bernardino	1866
72	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Upland	1880

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73	June 2, 2017	Water Code Section 13383 Order to Submit Method to Comply with Statewide Trash Provisions, Issued to the City of Yucaipa	1894

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. 90-71

NPDES No. CA 8000180

Waste Discharge Requirements
for
the County of Orange, the Orange County Flood Control District
and
the Incorporated Cities of Orange County Within the Santa Ana Region
Areawide Urban Stormwater Runoff
Orange County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. On March 15, 1990, 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, La Habra, La Palma, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda (hereinafter collectively referred to as dischargers), submitted NPDES Application No. CA 8000180 for an areawide stormwater discharge permit under the National Pollutant Discharge Elimination System (NPDES).

2. The 1972 Clean Water Act (CWA) recognized the need to prohibit the discharge of pollutants to surface water bodies from point sources such as industrial facilities and municipal sewage treatment plants. The discharges of pollutants from point sources are regulated by the NPDES permit system, which required technology-based controls for treatment of wastewater. Stormwater point source discharges were exempt from the NPDES permitting requirements unless these discharges were contaminated by industrial/commercial activity. The Regional Board recognized the water quality problems associated with stormwater discharges from industrial facilities and has issued a number of stormwater permits for such facilities in accordance with the EPA regulations.

3. In 1976, the United States Environmental Protection Agency (EPA) issued new regulations establishing a comprehensive permitting program for all stormwater discharges except for rural runoff uncontaminated by industrial/commercial activity. Channelized stormwater runoff from rural areas continued to be defined as nonpoint source unless designated otherwise by the permitting authority.

RBSA 28478
RB8 000001

4. Since 1976, EPA has issued several revisions to the stormwater regulations. Section 405 of the Water Quality Act (WQA) of 1987 added Section 402(p) to the CWA. Pursuant to Section 402(p)(4) of the CWA, EPA is required to promulgate regulations for stormwater permit applications for stormwater discharges associated with industrial activities and municipal separate storm drain systems serving a population of 100,000 or more. Section 402 (p)(4) of the CWA also requires dischargers of stormwater associated with industrial activities and municipal separate storm drain systems serving a population of 250,000 or more to file stormwater permit applications by February 4, 1990.

5. On December 7, 1988, EPA published its proposed regulations in the Federal Register to solicit public comments. Final regulations are tentatively scheduled to be promulgated on July 20, 1990 and to be published in the Federal Register on August 4, 1990. In the absence of final stormwater regulations, a permit governing municipal stormwater discharges should meet both the statutory requirements of Section 402 (p)(3)(B) and all requirements applicable to a NPDES permit issued under the issuing authority's discretionary authority in accordance with Section 402 (a)(1)(B) of the CWA.

6. Studies in urban areas have shown that urban runoff typically contains significant quantities of pollutants. There are a number of water quality segments in the Orange County drainage areas which could be adversely impacted by stormwater discharges and urban runoff. In some areas, such as Newport Bay, the beneficial uses have been impaired due to pollutant discharges. A comprehensive stormwater and urban runoff management and regulatory program is essential for the protection of the water resources of the Region. The County of Orange, the cities in Orange County, and the Regional Board have recognized this fact, and as a first step towards protecting water quality in the area, a comprehensive management program is being developed. This order outlines the existing programs and specifies additional requirements to achieve water quality objectives for the Orange County drainage areas. The intent of this permit is to regulate pollutant discharges and improve water quality in the Region in a timely manner.

7. Within the Santa Ana Region, the OCFCD serves a population of approximately 2.0 million, occupying an area of approximately 511 square miles (approximately 128 square miles of unincorporated areas and 383 square miles of incorporated areas). The District'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. The project area is shown on Attachment "A". 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 Order No. 90-38, NPDES No. CA 0108740, issued by the San Diego Regional Board.

8. The discharges consist of surface runoff generated from various land uses in all the hydrologic drainage areas which discharge into water bodies in Orange County. 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 illegal disposal practices/illicit connections. The constituents of concern and significance in these discharges are: total and fecal coliform, enterococcus, total suspended solids, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), oil and grease, heavy metals, nutrients, base/neutral and acid extractibles, pesticides, herbicides, petroleum hydrocarbon components, and pH.

9. There are several entities whose land/facilities drain into the Orange County storm drain systems. The County of Orange has control over a large portion of the storm drain systems and has agreed to be the major responsible party in implementing the provisions of this order. The incorporated cities within the county have also agreed to cooperate with the county in controlling and improving the quality of urban runoff from their respective areas. The County of Orange has been named as the "principal permittee" and the OCFCD and the incorporated cities have been named as "co-permittees". Attachment "C" lists the incorporated cities with their 1990 estimated populations. Of the 23 cities listed, there are seven cities with an estimated 1990 population of over 100,000.

10. Due to the enormous variability in stormwater quality and the complexity of the urban runoff management program, this areawide stormwater permit is categorized as a major NPDES permit. This areawide stormwater permit requires all entities discharging stormwater/urban runoff into the storm drain systems or any surface water bodies to have appropriate controls for proper management of stormwater runoff. The Regional Board has the discretion and authority to require non-cooperating entities to participate in this areawide permit or obtain individual stormwater discharge permits, pursuant to 40 CFR 122.26(a). The entities listed in Attachment "D" are considered as potential dischargers of stormwater to the Orange County drainage areas. It is expected that these entities will also work cooperatively with the County of Orange to manage urban stormwater runoff.

11. The County of Orange, as the "principal permittee", will obtain the cooperation of all entities in implementing the provisions of this order. The dischargers have agreed upon the responsibilities as outlined in the draft May 16, 1990 Implementation Agreement. In general, the County of Orange, the "principal permittee", will be responsible for preparing operating budgets, preparing and monitoring the implementation programs, and coordinating and submitting reports to the Regional Board. The OCFCD and the incorporated cities, the "co-permittees", will develop site-specific compliance requirements, perform compliance monitoring and inspections, submit storm drain maps and compliance reports to the County of Orange, and exercise enforcement authority for achieving compliance.

12. The County of Orange obtains its authority to control pollutants in stormwater discharges, to prohibit illegal discharges/illicit connections, to control spills, and to require compliance and carry out inspections of the storm drain systems in the County of Orange from the Orange County Flood Control Act, Orange County Water Pollution Ordinance, and various county ordinances which address industrial wastes and waste discharges within the unincorporated areas of Orange County and contract cities. The "Co-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 stormwater/urban runoff discharges.

13. A Water Quality Control Plan was adopted by the Regional Board on May 13, 1983. The Plan contains water quality objectives and beneficial uses of waters in the Santa Ana Region. On July 14, 1989, the Regional Board adopted a Basin Plan amendment, incorporating revised beneficial use designations for the ground and surface waters of the Region.

14. The State Water Resources Control Board (State Board) adopted a Water Quality Control Policy for the Enclosed Bays and Estuaries of California on May 16, 1974. The policy provides that the discharge of industrial process waters to enclosed bays and estuaries shall be prohibited. Stormwater and urban runoff are not considered industrial process waters for the purpose of that policy.

15. The 1988 California Ocean Plan, as amended on March 22, 1990, contains revised water quality objectives for California ocean waters in accordance with Section 303(c)(I) of the Clean Water Act and Section 13170.2(b) of the California Water Code.

16. The requirements contained in this order are necessary to implement the Ocean Plan and the Water Quality Control Plan.

17. An attempt has been made to incorporate all of the essential elements of the proposed federal stormwater regulations in this permit.

18. Stormwater discharges to the storm drain systems in Orange County are tributary to various water bodies of the state. The identified water bodies are as follows:

<u>Inland Surface Streams</u>

a. Santa Ana River[1], Reaches 1 and 2,

b. Silverado Creek,

c. Santiago Creek, Reaches 1, 2, 3, and 4,

d. San Diego Creek, Reaches 1 and 2,

e. San Joaquin Freshwater Marsh,

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[1] Stormwater/urban runoff discharged from the storm drain systems operated by the Counties of San Bernardino and Riverside drain into the Santa Ana River at Reaches 3, 4, 5, and 6

18. (cont'd)

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

Bay, Estuaries, and Tidal Prisms

g. Anaheim Bay,

h. Sunset Bay,

i. Bolsa Bay,

j. Lower and Upper Newport Bay,

k. Tidal Prism of Santa Ana River (to within 1000 feet of Victoria Street) and Newport Slough,

l. Tidal Prism of San Gabriel River (River Mouth to Marina Drive),

m. Tidal Prisms of Flood Control Channels Discharging to Coastal or Bay Waters (e.g. Huntington Harbour)

Ocean Waters

Nearshore Zone

n. San Gabriel River to Poppy Street in Corona Del Mar,

o. Poppy Street to Southeast Regional Boundary,

Offshore Zone

p. Waters between Nearshore Zone and Limit of State Waters,

Lakes and Reservoirs

q. Anaheim Lake,

r. Irvine Lake (Santiago Reservoir)

s. Laguna, Lambert, Peters Canyon, Rattlesnake, Sand Canyon, and Siphon Reservoirs.

18. (cont'd)

The beneficial uses of these water bodies include municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), groundwater recharge, navigation (NAV), water contact recreation (REC-1), non-contact water recreation (REC-2), ocean commercial and nonfreshwater sportfishing (COMM), warm freshwater habitat (WARM), cold freshwater habitat (COLD), preservation of areas of biological significance (BIOL), wildlife habitat (WILD), preservation of rare and endangered species (RARE), marine habitat (MAR), and shellfish harvesting (SHELL). The beneficial uses of individual water bodies are shown on Attachment "E".

19. Numeric and narrative water quality standards exist for these water bodies. Currently, this permit does not contain numeric limitations for any constituents because the impact of stormwater discharges on the water quality of the above named receiving waters has not been fully determined. Extensive water quality monitoring and analysis of the data are essential to make that determination. This order requires the dischargers to continue to monitor the stormwater discharges or begin monitoring as necessary, and to analyze the data. Additionally, the order also requires development and implementation of best management practices[2] (BMPs) in accordance with the WQA of 1987. It is anticipated that with the implementation of BMPs by the dischargers, the pollutants in the stormwater runoff will be reduced and the quality of the receiving waters will be improved. The ultimate goal of the urban stormwater runoff management program is to attain water quality consistent with the water quality objectives for the receiving waters to protect the beneficial uses.

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[2] Best Management Practices (BMPs) are water quality management practices that are maximized in efficiency for the control of stormwater runoff pollution.

20. The County of Orange has an active surface water quality monitoring program in the permit area. Dry weather sampling is performed bimonthly and wet weather sampling is performed during significant storm events (>0.5 inches of rainfall). Stormwater runoff samples collected are analyzed for nutrients, trace metals, specific conductance, dissolved oxygen, temperature, and pH. Sediment samples are also collected and analyzed for radiochemical constituents (only at Huntington Harbour), organics, and trace metals on a semi-annual basis. This monitoring program includes 21 water quality monitoring stations, 17 water level stations (12 of which are stream gaging stations), and 31 precipitation stations. Most of the water quality monitoring stations are located at storm drain systems associated with drainage areas in which land use activities have been identified to significantly impact the beneficial uses of waters in Orange County. These drainage areas, characterized as agricultural, commercial, and industrial, are mainly located upstream of Newport Bay. Those pollutants that have been identified to cause significant threat to the water quality of Newport Bay include nutrients (especially nitrates), pesticides, herbicides, and suspended solids.

21. With respect to industrial activities, the Regional Board currently regulates discharges of point source process wastewater and non-process wastewater and stormwater to storm drain systems through NPDES permits. The Regional Board is proposing to regulate three major nurseries discharging irrigation tail water to San Diego Creek by issuing waste discharge requirements. Point source discharges including stormwater will continue to be regulated by the Regional Board. Industrial stormwater dischargers are required to cooperate with the County of Orange to control the discharge of pollutants in the stormwater runoff from individual facilities or to obtain individual industrial stormwater discharge permits from the Regional Board.

22. Recognizing the need for public involvement and participation in the development and implementation of an effective stormwater/urban runoff management program, the Regional Board will conduct at least one workshop each year during the term of this permit. The purposes of the workshops will be to solicit comments and to inform the public of the progress of the program. Written comments submitted will be forwarded to the State Board, EPA, and the County of Orange for their review and comments.

23. 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.

24. The Regional Board has considered an antidegradation analysis, pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, for this discharge. The Regional Board finds that the stormwater discharges are consistent with the federal and state antidegradation requirements and a complete antidegradation analysis is not necessary.

25. The Regional Board has notified the dischargers and interested agencies and persons 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.

26. 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 dischargers, 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, including the following:

1. Administer the Orange County Water Pollution Ordinance.

2. Conduct water quality and hydrographic monitoring of the storm drain system outfalls as agreed upon by the Executive Officer.

3. Develop uniform criteria for storm drain system inspections.

4. Conduct inspections of the storm drain systems within its jurisdiction.

5. Implement management programs, monitoring programs, and implementation plans within its jurisdiction as required by this order.

I. RESPONSIBILITIES OF PRINCIPAL PERMITTEE - CONT'D

6. Prepare and submit to the Regional Board all the reports, plans, and programs as required in this order.

7. Monitor the implementation of the plans and programs and determine their effectiveness in attaining water quality objectives.

8. Coordinate all the activities with the Regional Board.

9. Enact legislation and ordinances as necessary to establish legal authority.

10. Obtain public input[3] for any proposed management and implementation plans.

11. Pursue enforcement actions as necessary to ensure compliance with stormwater management programs and implementation plans.

12. Respond to emergency situations such as accidental spills, leaks, illegal discharges/illicit connections etc. to prevent or reduce the discharge of pollutants to storm drain systems and waters of the United States.

II. RESPONSIBILITIES OF THE CO-PERMITTEES

The co-permittees shall be responsible for the management of storm drain systems within their jurisdictions, including the following:

1. Conduct storm drain system inspections in accordance with the uniform criteria developed by the principal permittee.

2. Conduct and coordinate with the principal permittee any surveys and characterizations needed to identify the pollutant sources and drainage areas.

3. Review and approve management programs, monitoring programs, and implementation plans.

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[3] Public input is demonstrated by: (1) disseminating the notice of availability of plans for review and comment to the public at large, environmental groups, federal, state and local agencies and other interested parties; and, (2) addressing concerns expressed by the public.

II. RESPONSIBILITIES OF THE CO-PERMITTEES - CONT'D

4. Implement management programs, monitoring programs, and implementation plans within each respective jurisdiction as required by this order.

5. Submit storm drain system maps with periodic revisions as necessary.

6. Prepare and submit all reports to the principal permittee in a timely manner.

7. Enact legislation and ordinances as necessary to establish legal authority.

8. Pursue enforcement actions as necessary to ensure compliance with the stormwater management programs and the implementation plans.

9. Respond to emergency situations such as accidental spills, leaks, illegal discharges/illicit connections, etc. to prevent or reduce the discharge of pollutants to storm drain systems and waters of the United States.

III. GENERAL REQUIREMENTS

1. The dischargers shall prohibit illegal discharges from entering into the municipal storm drain systems. Discharges conditionally allowed to enter storm drain systems are specified in Item V.6.

2. The dischargers shall develop and implement best management practices (BMPs) to control discharge of pollutants to the maximum extent practicable[4] to waters of the United States. The BMPs so developed, along with a time schedule for implementation, shall be submitted for the approval of and/or modification by the Executive Officer of the Regional Board. In developing the best management practices, the dischargers shall consider the water quality objectives of all the receiving water bodies.

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[4] Maximum Extent Practicable (MEP) means to the maximum extent possible, taking into account equitable considerations of synergistic, additive, and competing factors, including but not limited to, gravity of the problem, fiscal feasibility, public health risks, societal concern, and social benefits.

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA

1. Runoff Quality/Quantity

The dischargers shall collectively submit all quantitative information, generated since 1980 or earlier where better information exists, on stormwater discharges to the storm drain systems. This information will be used to facilitate the identification of sources of pollutants present in the stormwater discharges and to develop an effective discharge monitoring program for this order. Information to be submitted shall include the following:

a. Any historical averages and extremes data for stormwater discharges;

b. Analytical and flow data for stormwater samples collected from the storm drain system outfalls, and within any waters of the United States;

c. Precipitation data from the precipitation stations and the duration of the storm events (if available);

d. Discharge data from the storm drain systems as determined from the gaging stations;

e. Analysis of the data and the major pollutants identified in the stormwater discharges from each drainage area to each receiving water body and a determination whether the identified pollutants came from non-point source or point-source discharges.

2. System/Drainage Area Characterization

The dischargers shall submit information to the Regional Board for identification and characterization of the sources of pollutants in the stormwater discharges. The following information shall be provided:

a. An identification of all land use activities in each drainage area and a map showing various land use activities and storm drain systems in each drainage area.

b. An identification of the drainage areas, more than 50 acres in size, that discharge stormwater to the storm drain systems and of those drainage areas that discharge to storm drain systems with pipe diameters greater than 36 inches.

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA - CONT'D

c. The sizes of these drainage areas (acreage) and the sizes (pipe diameters or approximate dimensions of the storm drain systems) and physical characteristics of the storm drain systems. These physical characteristics shall include, but not be limited to, whether the storm drain system is lined or unlined and whether it has intermittent or continuous flow;

d. The names, locations, and Standard Industrial Codes (SIC) of specific industrial sources and principal land use activities in each drainage area, identified in IV.2.a., above, discharging to the storm drain systems. An estimate of the runoff coefficients for these drainage areas shall also be provided;

e. The locations of present storm drain outfalls discharging to waters of the United States. The name of each receiving water body shall be reported and the location of each outfall shall be indicated on a map;

f. The locations of major structural controls for stormwater discharge (e.g. retention basins, detention basins, etc).

3. Illegal Discharges/Illicit Connections

a. The dischargers shall provide a list of dischargers (permitted and unpermitted) known to exist currently who discharge process or non-process wastewater to the storm drain systems. The dischargers shall also provide any existing procedures used for detecting illegal discharges/illicit connections to the storm drain systems, the rationale for the procedures, and the drainage areas (or cities) in which these programs are practiced; and

b. A description of the present and historic use of ordinances or other controls to prohibit the illegal discharges/illicit connections to storm drain systems;

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA - CONT'D

4. Stormwater Management Program

A description of the existing stormwater/urban runoff management programs and structural and non-structural BMPs implemented by the dischargers.

5. Stormwater/Urban Runoff Monitoring Program

A description of the existing monitoring programs and the rationale for their selection.

6. Pollutant Information

The dischargers shall provide information regarding the discharge of any pollutant required under 40 CFR 122.21(g)(7)(iii) and (iv).

7. Other Pertinent Existing Information

The dischargers shall provide to the Regional Board any other existing information that is pertinent to this permit. For example, a description of drainage area hydrologic parameters.

V. RECONNAISSANCE SURVEY

1. The dischargers shall submit information from a reconnaissance survey to be conducted at the storm drain systems. The purpose of the survey is to identify illegal discharges/illicit connections to the storm drain systems. The reconnaissance survey field manual and implementation plan for prosecuting violators and eliminating illegal discharges so developed, along with time schedules for implementation, shall be submitted for the approval of and/or modification by the Executive Officer of the Regional Board.

2. By January 31, 1991, a proposed reconnaissance survey field manual, including a time schedule, shall be submitted for approval and/or modification by the Executive Officer of the Regional Board.

V. RECONNAISSANCE SURVEY - CONT'D

3. The discharger shall implement the reconnaissance survey field manual after consideration of public comments and approval/modification of the manual by the Executive Officer of the Regional Board. By January 31, 1992 and every year thereafter, until the completion of the survey, a progress report containing the following information shall be submitted:

   a. Results of the reconnaissance survey, including an analysis of the results.

   b. Additional information that would lead to isolating and identifying sources of illegal discharges/illicit connections to the storm drain systems. Such information should include, but is not limited to, visual observations (e.g. color, turbidity, odor, etc), major land use activities in the surrounding drainage areas, seasonal change of flow, the surrounding hydrogeologic formation, etc.

   c. A listing of any identified or suspected illegal dischargers including the names, locations, and types of the facilities and the names of the storm drain systems and receiving waters the illegal discharges are discharged to.

   d. A listing of large industrial facilities (with more than 100 employees) where hazardous/toxic substances are stored and/or used, landfills, hazardous waste disposal, treatment, and/or recovery facilities, and any known spills, leaks or other problems in the area.

   e. A discussion on all activities, related to the survey, conducted for the past 12 months.

4. By January 31, 1992, the dischargers shall submit a proposed implementation plan, including a tentative time schedule, to prosecute violators and eliminate such discharges to the storm drain systems. The proposed plan shall also include a description of the legal authorities for prosecuting violators and eliminate or control illicit disposal practices/illegal discharges to the storm drain systems, and a proposed time schedule for obtaining such legal authorities, if necessary.

V. RECONNAISSANCE SURVEY - CONT'D

5. The dischargers shall implement the program for prosecuting violators and eliminate illegal discharges to the storm drain systems after consideration of public comments and approval/modification of the program by the Executive Officer of the Regional Board. By January 31, 1993 and every year thereafter, the discharger shall submit a progress report evaluating the effectiveness of the plan in detecting and eliminating illegal discharges/illicit connections to the storm drain systems.

6. The permittees shall effectively eliminate all identified illegal discharges/illicit connections in the shortest time practicable, and in no case later than July 1, 1995. Those illegal discharges/illicit connections identified after July 1, 1995 shall be eliminated in the shortest time practicable. The following discharges shall not be considered illegal discharges provided the discharges do not cause or contribute to violations of water quality standards and are not significant contributors of pollutants to waters of the United States: discharges composed entirely of stormwater, discharges covered under NPDES permits or waivers/clearances, discharges to storm drain systems form potable water line flushing, fire fighting, landscape irrigation, diverted stream flows, rising groundwaters (not including active dewatering systems), groundwater infiltration as defined at 40 CFR 35.2005(20), discharges from potable water sources, passive foundation drains (not including active groundwater dewatering), air conditioning condensation, irrigation water, water from crawl space pumps, passive footing drains (not including active groundwater dewatering systems), lawn watering, individual residential vehicle washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash waters related to cleaning and maintenance by permittees, or waters not otherwise containing wastes as defined in California Water Code Section 13050 (d). If it is determined that any of the preceding discharges cause or contribute to violations of water quality standards or are significant contributors of pollutants to waters of the United States, the permittees shall prohibit these discharges from entering storm drain systems.

VI. DRAINAGE AREA MANAGEMENT PROGRAM

1. The dischargers shall develop and implement best management practices (BMPs) to control the discharge of pollutants to waters of the United States. The discharger shall submit information pertaining to the proposed stormwater system management programs for approval of and/or modification by the Executive Officer of the Regional Board. The information shall include, but need not be limited to, the following:

   a. A brief description of the existing BMPs and other stormwater system management programs.

   b. Proposed modifications to the existing BMPs and other stormwater system management program to reduce pollutants in the stormwater discharges from industrial, commercial, and residential areas to the maximum extent practicable. At a minimum, the following shall be considered in developing the BMPs:

      Structural Controls

      i. For the permitted area, wherever appriopriate, structural controls such as first flush diversion, detention/retention basins, infiltration trenches/basins, porous pavement, oil/grease separators, grass swales, wire concentrators, etc.

      Non-Structural Controls

      ii. Education programs to educate the public on proper disposal of hazardous/toxic wastes. These may include public workshops, meetings, notifications by mail, collection programs for household hazardous wastes, etc.

      iii. Management practices such as street sweeping, proper maintenance of streambanks, erosion control structures, etc.

      iv. Regulatory approaches such as county and local ordinances, permitting of construction sites, etc.

VI. DRAINAGE AREA MANAGEMENT PROGRAM - CONT'D

v. Enforcement programs, established by the county and cities, including response to emergency incidents, field inspections, **and identification and elimination of illegal discharges/illicit connections to the storm drain systems.**

c. An implementation plan for site-specific BMPs which are required to reduce pollutants in the stormwater discharges from residential, commercial and industrial areas, and construction sites. Requirements for the implementation of BMPs at these sites are described below:

i. New Construction Sites

Runoff from construction sites has the potential to adversely impact the quality of waters of the United States. A full range of structural and non-structural BMPs shall be required at new construction sites. All industrial/commercial construction operations that result in a disturbance of one acre or more of total land area (or a smaller parcel of land which is a part of a larger common development) and residential construction sites that result in a disturbance of five acres or more of total land area (or a smaller parcel of land which is a part of a larger common development) shall be required to develop and implement BMPs, **including a long term funding mechanism and commitment to support required maintenance of the BMPs,** to control erosion/siltation and contaminated runoff from the construction sites.

ii. Residential and Commercial/Industrial Sites

Numerous studies have shown that runoff from residential and commercial/industrial areas has contributed a number of pollutants into waters of the United States. As development progresses, the percentage of paved surface increases, the rate of runoff increases, and the amount of pollutants in the runoff also increases. To prevent the increase of pollutants in the stormwater discharges, all new developments and existing facilities with

VI. DRAINAGE AREA MANAGEMENT PROGRAM - CONT'D

ii. Residential and Commercial/Industrial Sites - (cont'd)

significant redevelopment, irrespective of their size, must develop individual comprehensive, long-term, post construction stormwater management plans, incorporating the structural and non-structural BMPs. These management plans shall include a long term funding mechanism and commitment to support required maintenance of the BMPs.

d. A description of the legal authorities for implementing the programs, and a proposed time schedule for obtaining such legal authorities, if necessary.

e. A description of staff, equipment, and funds available to implement the programs.

2. By July 31, 1991, the BMPs and other stormwater system management program so developed, along with a time schedule for implementation, shall be submitted for the approval of and/or modification by the Executive Officer of the Regional Board.

3. The dischargers shall implement the BMPs and other stormwater management programs after consideration of public comments and approval/modification of the programs by the Executive Officer of the Regional Board. By July 31, 1992 and every year thereafter, the dischargers shall submit a progress report assessing the reduction of pollutants discharged to waters of the United States and to evaluate the effectiveness of the BMPs developed for the stormwater discharges. The dischargers shall also include recommended BMP modifications, with a time schedule for implementation, needed to achieve compliance with any water quality objectives not attained.

VII. STORMWATER SYSTEM MONITORING PROGRAM

1. The discharger shall submit a stormwater system monitoring program for approval of and/or modification by the Executive Officer. The objectives of the stormwater system monitoring program are:

VII. STORMWATER SYSTEM MONITORING PROGRAM - CONT'D

a. To define the type, magnitude (concentration and mass load), and sources of pollutants in the stormwater system discharges within each permittee's respective jurisdiction so that appropriate pollution prevention and correction measures can be identified;

b. To evaluate the effectiveness of pollution prevention and correction measures; and

c. To evaluate the compliance with water quality objectives established for the stormwater system or its components.

2. At a minimum, the stormwater system monitoring program shall include the following:

a. A brief description of the existing monitoring programs.

b. For both storm and non-storm conditions, sampling of the stormwater system discharges at major and representative outfalls discharging to waters of the United States to determine the pollutant loading rates to each receiving water body listed in Attachment "E".

c. For both storm and non-storm conditions, a description of the number of monitoring stations, the locations of these monitoring stations, and the rationale for their selection.

d. For both storm and non-storm conditions, a description of the physical, chemical, and biological parameters selected for analysis, the method of analysis, the type of sampling, and the sampling frequency proposed. The rationale for each of these selections shall be provided.

e. Monitoring of the stormwater system discharges to identify illicit connections shall be conducted.

f. Quality assurance and quality control plans for the stormwater system monitoring program shall be submitted.

g. A data base that consolidates all monitoring information shall be maintained.

VII. STORMWATER SYSTEM MONITORING PROGRAM - CONT'D

h. A description of the staff, equipment, and funds available to implement the monitoring program shall be provided.

i. A description of the legal authorities for implementing the program, and a proposed time schedule for obtaining such legal authorities (if necessary) shall be provided.

3. By November 30, 1990, the stormwater system monitoring program so developed, along with a time schedule for implementation, shall be submitted for the approval of and modification by the Executive Officer of the Regional Board.

4. The dischargers shall implement the stormwater system monitoring program after consideration of public comments and approval/modification of the program by the Executive Officer of the Regional Board. By November 30, 1991 and every year thereafter, the dischargers shall submit a report on progress towards implementation of the approved stormwater monitoring program.

VIII. RECEIVING WATER MONITORING PROGRAM

1. The discharger shall develop a receiving water monitoring program to assess the effects of pollutants from the stormwater system discharges on receiving water bodies, and to evaluate compliance with water quality objectives of the receiving water bodies. All the water bodies listed in Attachment "E" shall be addressed. The receiving water monitoring program shall be coordinated with the stormwater system monitoring program required under Section VII such that the aforestated objectives of the receiving water monitoring program will be achieved.

2. At a minimum, the receiving water monitoring program shall include the following:

a. A brief description of the existing monitoring programs.

b. A description of the number of monitoring stations, the location of these monitoring stations, and the rationale for their selection.

VIII. RECEIVING WATER MONITORING PROGRAM - CONT'D

c. A description of the physical, chemical and biological selected for analysis, the type of sampling, and the sampling frequency proposed. The rationale for each of these selections shall be provided.

d. Quality assurance and quality control plans for the receiving water monitoring program.

e. Maintenance of a data base that consolidates all monitoring information. This data base shall be coordinated with the data base required for the stormwater system monitoring program (VII.2.g.).

3. By November 30, 1990, the discharger shall submit a proposed receiving water monitoring program, including a time schedule for implementation, for the approval of and modification by the Executive Officer of the Regional Board.

4. The dischargers shall implement the receiving water monitoring program after consideration of public comments and approval/modification of the program by the Executive Officer of the Regional Board. By November 30, 1991 and every year thereafter, the discharger shall submit a report on progress towards implementation of the approved receiving water monitoring program.

IX. FISCAL ANALYSIS

1. By July 31, 1991 and every year thereafter, a fiscal analysis of the capital and operation and maintenance expenditures necessary to accomplish the activities of the proposed plans and programs shall be performed.

2. By August 31, 1991 and every year thereafter, a fiscal analysis of the capital and operation and maintenance expenditures shall be submitted for review by EPA and the Regional Board.

X. DATA ANALYSIS

1. For the stormwater system monitoring program, the results of the chemical analysis and quantitative data (such as flow, precipitation, and discharge data) shall be compiled for each drainage area, each storm event, and for different times during the same storm event. The mass loading rates for the pollutants of concern shall be calculated.

X. DATA ANALYSIS - CONT'D

2. An evaluation shall be performed for the calculated mass loading rates from the stormwater system monitoring program and the receiving water monitoring program. Any impact of the discharges from the stormwater systems on the receiving waters shall be discussed, starting with the most significantly impacted receiving water bodies. The evaluation shall be concluded with recommendations and the corrective actions proposed for any resulting discrepancies.

3. By January 31, 1992 and every year thereafter, the analysis of all the above data shall be submitted.

XI. PROGRAM ANALYSIS

1. In January of every year, the principal permittee shall conduct an analysis of the effectiveness of the overall stormwater management program. If the water quality objectives of the receiving waters are violated as a result of stormwater/urban runoff discharges, the principal permittee shall identify proposed programs which will result in the attainment of the water quality objectives, and a time schedule to implement the new programs.

2. By March 31, 1992 and every year thereafter, the analysis of the overall program and any proposed programs, to achieve compliance with water quality objectives of water bodies that have not been attained, shall be submitted.

XII. REPORTING

1. All reports shall be signed by a responsible officer or duly authorized representative of the discharger and shall be submitted to EPA and the Regional Board under penalty of perjury.

2. A signed copy of the Implementation Agreement between the County of Orange, the OCFCD, and the cities shall be submitted by January 31, 1991. Any revisions to the Implementation Agreement shall be forwarded to the Executive Officer within 30 days of approval by all the dischargers.

3. Other reports and information required to be submitted to the Regional Board under the requirements specified above shall be reported in accordance with the following schedule:

XII. REPORTING - CONT'D

TASK		COMPLIANCE REPORT DUE
a.	Existing reports and programs IV.1.-IV.7.	01/31/91
b.	Proposed Reconnaissance Survey Field Manual - V.2	01/31/91
c.	Proposed Implementation Plan for Prosecuting Illegal Discharges - V.4.	01/31/92
d.	Management Programs (BMPs) and Implementation Plan - VI.1 & VI.2.	07/31/91
e.	Stormwater System Monitoring Program VII.1. - VII.3.	11/30/90
f.	Receiving Water Monitoring Program VIII.1. - VIII.3.	11/30/90
g.	Progress Reports after Plan Implementation	
	i. Reconnaissance Survey - V.3.	01/31 of every year[5]
	ii. Illegal Discharges - V.5.	01/31 of every year[6]
	iii. Management Programs - VI.3.	07/31 of every year[7]
	iv. Stormwater System Monitoring Program VII.4.	11/30 of every year[8]
	v. Receiving Water Monitoring Program VIII.4.	11/30 of every year[9]
h.	Compliance - Illegal Discharges	See Item V.6.

[5] The first progress report is due on January 31, 1992.

[6] The first progress report is due on January 31, 1993.

[7] The first progress report is due on July 31, 1992.

[8] The first progress report is due on November 30, 1991.

[9] The first progress report is due on November 30, 1991.

XII. REPORTING - CONT'D

TASK		COMPLIANCE REPORT DUE
i.	Fiscal Analysis - IX.	08/31 of every year[10]
j.	Data Analysis - X.	01/31 of every year[11]
k.	Program Analysis - XI.	03/31 of every year[12]

XIII. EXPIRATION AND RENEWAL

1. This Order expires on July 1, 1995 and the discharger must file a Report of Waste Discharge in accordance with outlaw 23, Chapter 3, Subchapter 9 of the California Code of Regulations not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements. This report of waste discharge shall include, but is not limited to, the following:

   a. Summary of the results of the monitoring program.

   b. Summary of BMPs implemented and evaluations of their effectiveness.

   c. Summary of procedures implemented to detect, identify, and eliminate illegal discharges and illicit disposal practices and an evaluation of their effectiveness.

   d. Summary of enforcement procedures and actions taken to require stormwater dischargers to comply with the approved stormwater management programs.

   e. Summary of measures implemented to control pollutants in surface runoff from construction sites and an evaluation of their effectiveness.

   f. Evaluation of the need for additional BMPs, source control, and/or structural control measures.

   g. Proposed plan of stormwater/urban runoff quality management activities that will be undertaken during the term of the next permit.

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[10] The first annual fiscal analysis is due on August 31, 1991.

[11] The first data analysis is due on January 31, 1992.

[12] The first program analysis is due on March 31, 19

XIII. EXPIRATION AND RENEWAL - CONT'D

h. Any significant changes to the storm drain systems, outfall locations, detention/retention basins, and structural/non-structural controls.

2. This order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Clean Water Act, or amendments thereto, and shall become effective 10 days after date of its adoption, provided that the Regional Administrator of the Environmental Protection Agency has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

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 July 13, 1990.

Gerard J. Thibeault
Executive Officer

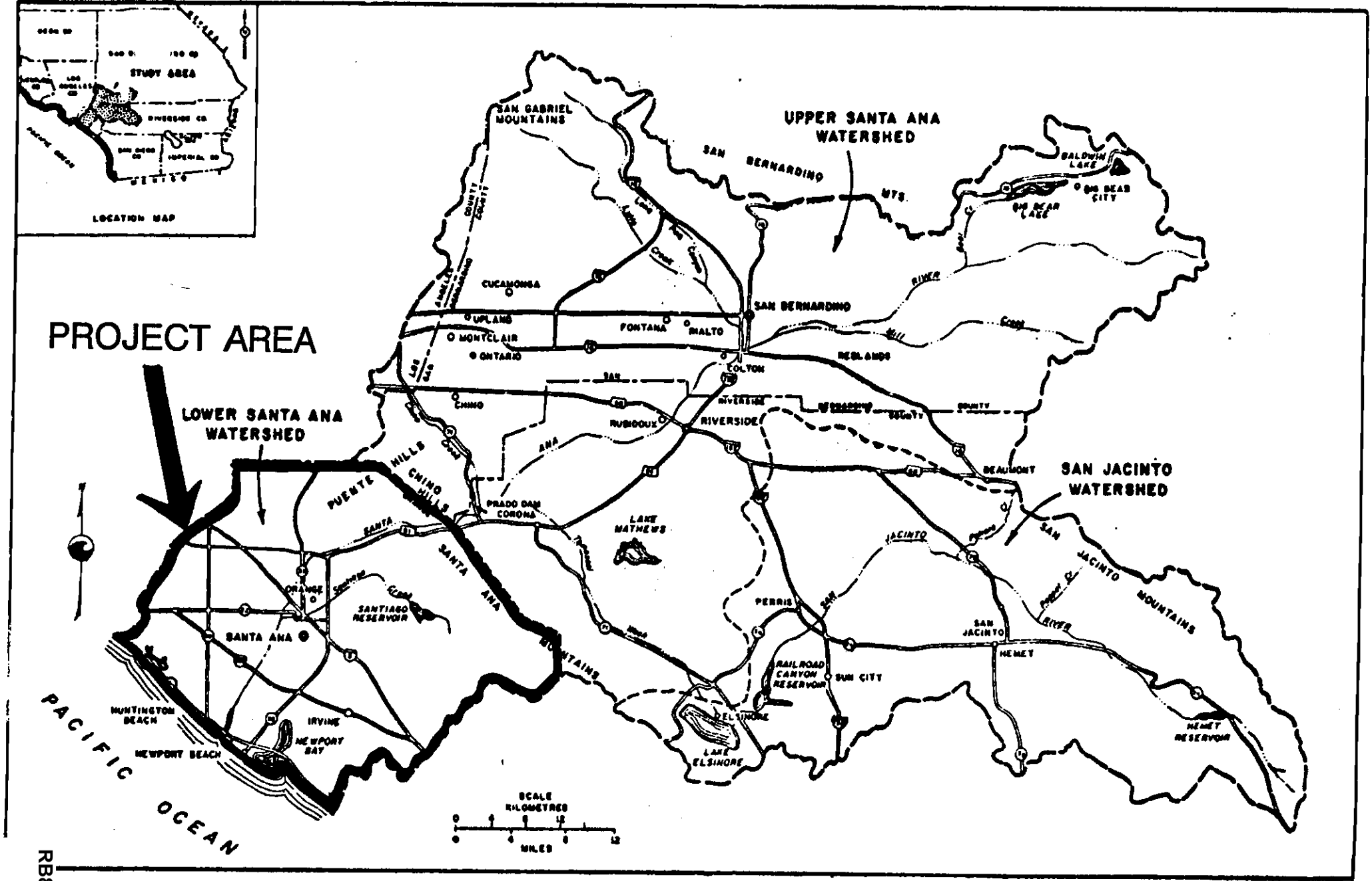
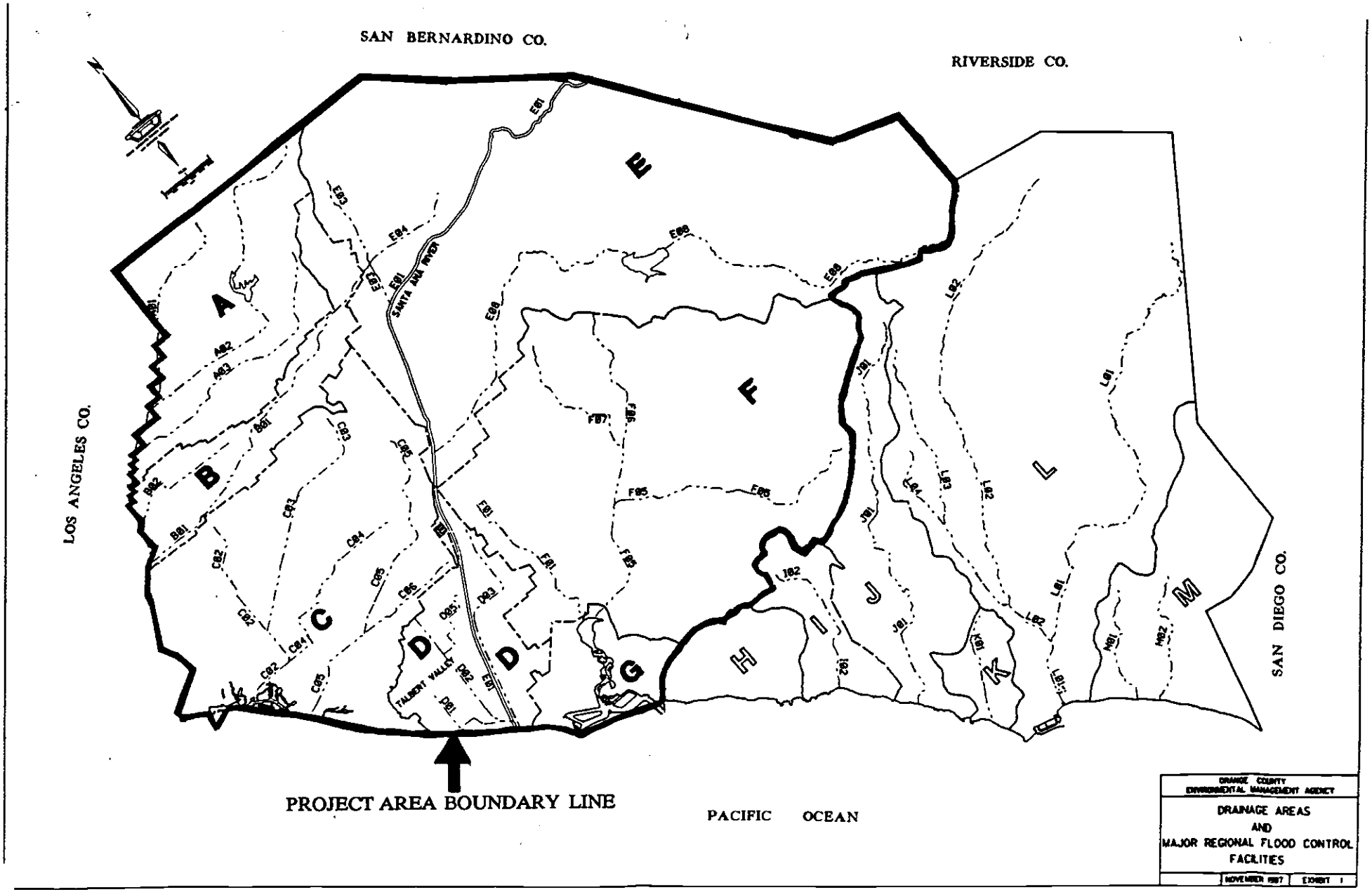


FIGURE I - SANTA ANA PLANNING AREA

RB8 000027
RBSA_28504

Order No. 90-71
NPDES No. CA 8000180
Attachment "A"



Order No. 90-71
NPDES No. CA 8000180
Attachment "B"

LEGEND

A,B - San Gabriel River Drainage Area
C - Huntington Harbour & Bolsa Bay Drainage Area
D - Greenville-Banning Channel Drainage Area
E - Santa Ana River Drainage Area
F,G - Newport Bay Drainage Area

RB8 000028

RBSA_28505

ATTACHMENT "C"

Incorporated Cities of Orange County and 1990 Population Estimate, Santa Ana Region

Anaheim	249556
Brea	33698
Buena Park	66090
Costa Mesa	96094
Cypress	44323
Fountain Valley	55780
Fullerton	109972
Garden Grove	137632
Huntington Beach	187782
Irvine	105311
La Habra	48964
La Palma	16291
Los Alamitos	12561
Newport Beach	70091
Orange	108144
Placentia	43775
Santa Ana	233782
Seal Beach	27110
Stanton	28796
Tustin	53030
Villa Park	7022
Westminster	72413
Yorba Linda	49479

ATTACHMENT "D"

POTENTIAL POLLUTANT DISCHARGE ENTITIES IN ORANGE COUNTY

Caltrans
Universities and Colleges
  University of California, Irvine
  University of California, Riverside
  California State University, Fullerton
  Coastline College
  Cypress College
  Fullerton College
  Irvine Valley College
  Golden West College
  Orange Coast College
  Rancho Santiago College
Metropolitan Water District
Department of Defense
  Naval Weapons Station, Seal Beach Naval Reserve Center, Los Alamitos
School Districts
  Lowell
  La Habra
  Brea-Olinda
  Buena Park
  Fullerton
  Yorba Linda
  Placentia
  Cypress
  Centralia
  Savanna
  Magnolia
  Anaheim
  Orange
  Los Alamitos
  Garden Grove
  Santa Ana
  Tustin
  Westminster
  Ocean View
  Fountain Valley
  Huntington Beach
  Newport-Mesa
  Irvine
  Saddleback
  Laguna Beach
Hospitals
  Fairview Hospital, Costa Mesa
  U.C. Irvine Medical Center
Orange County Sanitary District
Orange County Water District
Southern Pacific Railroad
ATSF Railroad

ATTACHMENT "D" (CONT'D)

Army Corps of Engineers
- Carbon Canyon Dam
- Brea Dam
- Fullerton Dam
- Prado Dam

National Forest Service

State Parks
- Chino Hills State Park
- Crystal Cove State Park
- San Clemente State Park

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
OCEAN WATERS																		
NEARSHORE ZONE*																		
San Gabriel River to Poppy Street in Corona del Mar	+		X			X		X	X	X							X	X
Poppy Street to Southeast Regional Boundary	+					X		X	X	X			X				X	X
OFFSHORE ZONE																		
Waters Between Nearshore Zone and Limit of State Waters	+					X		X	X	X							X	
BAYS, ESTUARIES, AND TIDAL PRISMS																		
Anaheim Bay - Outer Bay	+					X		X	X				X	X	X		X	
Anaheim Bay - National Wildlife Refuge Portion	+							X[1]	X				X	X	X		X	
Sunset Bay - Huntington Harbour	+					X		X	X	X				X			X	
Bolsa Bay	+							X	X	X			X	X	X		X	X
Lower Newport Bay	+					X		X	X	X							X	X
Upper Newport Bay	+							X	X	X			X	X	X		X	X
Tidal Prism of Santa Ana River (to within 1000' of Victoria Street) and Newport Slough	+							X	X	X				X	X		X	
Tidal Prism of San Gabriel River - River Mouth to Marina Drive	+							X	X	X				X			X	X
Tidal Prisms of Flood Control Channels Discharging to Coastal or Bay Waters	+							X	X	X				X			X	

*Defined by Ocean Plan Chapter II A.1.: "Within a zone bounded by shoreline and a distance of 1000 feet from shoreline or the 30-foot depth contour, whichever is further from shoreline..."

+ Excepted from MUN by Reg. Bd. Res. 89-42

1 No access per agency with jurisdiction (U.S. Navy)

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

Order No. 90-71
NPDES No. CA 8000180
Attachment "E"

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
INLAND SURFACE STREAMS																		
LOWER SANTA ANA RIVER BASIN																		
Santa Ana River																		
Reach 1- Tidal Prism to 17th St in Santa Ana	+							X[2]	I		I			I				
Reach 2- 17th Street in Santa Ana to Prado Dam	+	X			X			X	X		X			X				
Santiago Drainage																		
Silverado Creek	X				X			X	X			X		X				
Santiago Creek:																		
Reach 1- below Irvine Lake	X				X			X[2]	X			X		X				
Reach 2- Irvine Lake (see Lakes, p. 2-13)																		
Reach 3- Irvine Lake to Modjeska Canyon	I				I			I	I		I			I				
Reach 4- in Modjeska Canyon	X				X			X	X			X		X				
San Diego Creek Drainage																		
San Diego Creek:																		
Reach 1- below Jeffrey Road	+							X[2]	X		X			X				
Reach 2- above Jeffrey Road to Headwaters	+				I			I	I		I			I				
San Joaquin Freshwater Marsh	+							X	X		X			X	X			
All Other Tributaries to these Creeks: Bonita Creek, Serrano Cr., Peters Canyon Wash, Hicks Canyon Wash, Bee Canyon Wash, Borrego Canyon Wash, Agua Chinon Wash, Laguna Canyon Wash, Rattlesnake Canyon Wash, Sand Canyon Wash	+				I			I	I		I			I				

+ Excepted from MUN by Reg. Bd. Res. 89-42
2 Access prohibited in all or part by Orange County Environmental Management Agency (OCEMA)

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

Order No. 90-7
NPDES No. CA
Attachment "E"

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
LAKES AND RESERVOIRS																		
UPPER SANTA ANA RIVER BASIN																		
Baldwin Lake	+							I	I		I	I		I				
Big Bear Lake	X	X			X			X	X		X	X		X				
Evans Lake	+							X	X		X	X		X				
Jenks Lake	X	X			X			X	X			X		X				
Lee Lake	+	X	X		X			X	X		X			X				
Mathews, Lake	X	X	X	X	X			X[4]	X		X			X	X			
Mockingbird Reservoir	+	X						X[5]	X		X			X				
Norconian, Lake	+							X	X		X			X				
LOWER SANTA ANA RIVER BASIN																		
Anaheim lake	+				X			X	X		X			X				
Irvine lake (Santiago Reservoir)	X	X						X	X		X	X		X				
Laguna, Lambert, Peters Canyon, Rattlesnake, Sand Canyon and Siphon Reservoirs	+	X						X[6]	X		X			X				
SAN JACINTO RIVER BASIN																		
Canyon Lake (Railroad Canyon Reservoir)	X	X			X			X	X		X			X				
Elsinore, Lake	+							X	X		X			X				
Fulmor, Lake	X	X						X	X		X	X		X				
Hemet, Lake	X	X			X			X	X		X	X		X		X		
Perris, Lake	X	X	X	X	X			X	X		X	X		X				

\+ Excepted from MUN by Reg. Bd. Res. 89-42
4 Access prohibited by the Metropolitan Water District
5 Access prohibited by the Gage Canal Company (owner-operator)
6 Access prohibited by Irvine Ranch Company (owner)

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

Order No. 90-71
NPDES No. CA 8000180
Attachment "E"

California Regional Water Quality Control Board
Santa Ana Region

July 13, 1990

ITEM: 10

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, Stormwater Runoff Management Program, Orange County, Order No. 90-71 (NPDES No. CA 8000180)

DISCUSSION:

See attached Fact Sheet.

RECOMMENDATION:

Adopt Order No. 90-71, NPDES No. CA 8000180, as presented.

In addition to the dischargers, comments were solicited from the following agencies and/or persons:

U. S. Environmental Protection Agency - Robert Wills, Pretreatment, Sludge, and Stormwater Section
U.S. Army District, Los Angeles, Corps of Engineers - Permits Section
NOAA, National Marine Fisheries Service
U.S. Fish and Wildlife Service
State Water Resources Control Board - Ted Cobb, Office of the Chief Counsel
State Water Resources Control Board - Archie Matthews, Division of Water Quality
State Department of Water Resources - Los Angeles
California Regional Water Quality Control Board, San Francisco Bay Region (2) - Tom Mumley
California Regional Water Quality Control Board, Los Angeles Region (4) - Catherine Tyrell
California Regional Water Quality Control Board, Central Valley Region (5) - Wayne Pierson
California Regional Water Quality Control Board, San Diego Region (9) - Bruce Posthumus
State Department of Fish and Game - Marine Resources Region
State Department of Health Services - Santa Ana
State Department of Health Services - San Diego
State Department of Health Services - San Bernardino
State Department of Parks and Recreation - Henry R. Agonia
Orange County Health Care Agency - Robert Merryman

San Bernardino County Department of Health Services - Paul Ryan
San Bernardino County Flood Control District - Chuck Laird
Riverside County Health Department - John Fleming
Riverside County Flood Control & Water Conservation District - Frank Peairs
South Coast Air Quality Management District, El Monte
Caltrans, District 8 - Santa Ana
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
U. S. Army Corps of Engineers
National Forest Service
Brown & Caldwell - Jack Baylis
Uribe And Associates - Geoff Brosseau
Bill Dendy & Associates - Bill Dendy
Irvine Company - Sat Tamaribuchi
Building Industry Association - Governmental Affairs Council

Universities and Colleges

University of California, Irvine
University of California, Riverside
California State University, Fullerton
Chapman College
Coastline College
Cypress College
Fullerton College
Irvine Valley College
Golden West College
Orange Coast College
Rancho Santiago College
California State Polytechnic University, Pomona, Department of Geography & Social Sciences - Dr. Crane Miller

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 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

School Districts - cont'd
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
Fairview Hospital, Costa Mesa
U.C. Irvine Medical Center
Environmental Organizations
Sierra Club, Orange County Chapter
Sierra Club, Los Angeles Chapter - Dick Hingson
Natural Resources Defense Council (NRDC)
Cousteau Society
Amigos De Bolsa Chica
Audobon Sea & Sage Chapter
Huntington Beach Wetlands Conservancy
Surfrider Foundation
Newspapers
Orange County Register
Los Angeles Times
Press Enterprise
Major Water/Wastewater Agencies
Santa Ana Watershed Project Authority - Neil Cline
Irvine Ranch Water District - John Morris
Los Alisos Water District - Kenneth Peterson
El Toro Water District - Robert Hill
L.A. County Department of Public Works - John Mitchell
County Sanitation Districts of Orange County - Wayne Sylvester
Orange County Water District - Bill Mills
Metropolitan Water District - Kevin Wattier
Other Cities in the Region with population >100,000
City of Ontario - City Manager/Director of Public Works
City of San Bernardino - City Manager/Director of Public Works
City of Fontana - City Manager/Director of Public Works
City of Rancho Cucamonga - City Manager/Director of Public Works
City of Riverside - City Manager/Director of Public Works
City of Moreno Valley - City Manager/Director of Public Works

California Regional Water Quality Control Board
Santa Ana Region
6809 Indiana Avenue, Suite 200
Riverside, CA 92506-4298

FACT SHEET

PROJECT

The attached pages contain information concerning an application for waste discharge requirements and a National Pollutant Discharge Elimination System (NPDES) permit. Order No. 90-71, NPDES No. CA 8000180, prescribes waste discharge requirements for urban stormwater runoff from the cities and the unincorporated areas in Orange County within the jurisdiction of the Santa Ana Regional Board. On March 15, 1990, 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, La Habra, La Palma, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda (hereinafter collectively referred to as the dischargers), submitted NPDES Application No. CA 8000180 for an areawide stormwater discharge permit under the National Pollutant Discharge Elimination System (NPDES). As part of the permit application, a topographic map, a storm drain system map, listings of cities and entities participating in this program, and copies of ordinances relevant to the urban stormwater runoff of various cities were submitted.

PROJECT 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 "B").

CLEAN WATER ACT REQUIREMENTS

The Federal Clean Water Act (CWA) allows the U. S. Environmental Protection Agency (EPA) to delegate its NPDES permitting authority to states with an approved environmental regulatory program. The State of California is one of the delegated states. The Porter-Cologne Act (California Water Code) authorizes the State Board, through its Regional Boards, to regulate and control the discharge of pollutants into waters of the state and tributaries thereto.

RB8 000038 RBSA 28515

CLEAN WATER ACT REQUIREMENTS - CONT'D

Section 405 of the Water Quality Act (WQA) of 1987 added Section 402(p) to the CWA. Pursuant to Section 402(p)(4) of the CWA, the EPA is required to promulgate regulations for stormwater permit applications for stormwater discharges associated with industrial activities and municipal separate storm drain systems serving a population of 100,000 or more. Section 402 (p)(4) of the CWA also requires dischargers of stormwater associated with industrial activities and municipal separate storm drain systems serving a population of 250,000 or more to file stormwater permit applications by February 4, 1990.

On December 7, 1988, EPA published its proposed regulations in the Federal Register to solicit public comments. Final regulations are tentatively scheduled to be promulgated on July 20, 1990 **and to be published in the Federal Register on August 4, 1990.** In the absence of final stormwater regulations, a permit governing municipal stormwater discharges should meet both the statutory requirements of Section 402 (p)(3)(B) and all requirements applicable to a NPDES permit issued under the issuing authority's discretionary authority in accordance with Section 402 (a)(1)(B) of the CWA.

AREAWIDE STORMWATER PERMIT

To regulate and control stormwater discharges from the Orange County area to the Orange County storm drain systems, an areawide approach is essential. The entire storm drain system is not controlled by a single entity; the County of Orange, the OCFCD, and several cities manage the system. In addition to the cities and the county, there are a number of other significant contributors of urban stormwater runoff to these storm drain systems. These include: large institutions such as the State University system, schools, hospitals etc.; state agencies such as Caltrans; public utilities such as Orange County Water District, Metropolitan Water District etc.; national defense installations such as Seal Beach Naval Weapons Station, El Toro Marine Base, etc.; National Forest Service; state parks; and entertainment centers such as Disneyland. Some of these storm drain systems discharge into storm drain systems controlled by other entities, such as the Los Angeles County Flood Control District, which is under the Los Angeles Regional Board's jurisdiction. The Los Angeles area storm drain systems are regulated under a separate permit, NPDES No. CA 0061654, issued by the Los Angeles Regional Board. Stormwater runoff draining into the storm drain systems in Orange County under the San Diego Regional Board's jurisdiction is regulated by Order No. 90-38, NPDES No. CA 0108740, issued by the San Diego Regional Board. Some of the storm drain systems controlled by the Counties and Cities of San Bernardino and Riverside discharge into storm drain systems of the County and Cities of Orange.

AREAWIDE STORMWATER PERMIT - CONT'D

The management and control of the entire flood control system cannot be effectively carried out without the cooperation and efforts of all these entities. Also, it would not be meaningful to issue a separate stormwater permit to each of the entities within the permitted area whose land/facilities drain into the county storm drain systems. The Regional Board and a majority of the cities and the county have concluded that the best management option for the Orange County area is to issue an areawide stormwater permit.

COORDINATION WITH OTHER REGIONAL AGENCIES

In developing best management practices and monitoring programs, consultation/coordination with other flood control districts and other regional boards are essential. Regional Board staff will coordinate the program with other regional boards and other flood control districts/cities on an "as needed" basis.

EXISTING FACILITIES AND PROGRAMS

Within the Santa Ana Region, Orange County Flood Control District, operated by the County of Orange, serves a population of approximately 2.0 million, occupying an area of approximately 511 square miles **(approximately 128 square miles of unincorporated areas and 383 square miles of incorporated areas)**. The District's system includes an estimated 400 miles of drainage facilities. A major portion of the urbanized areas of Orange County drains into water bodies within this Regional Board's jurisdiction. Stormwater discharges from these urbanized areas consist mainly of surface runoff from various land use activities such as residential, commercial, industrial, and agricultural. The constituents of concern and significance in these discharges are: total and fecal coliform, **enterococcus**, total suspended solids, biochemical oxygen demand, chemical oxygen demand, total organic carbon (TOC), oil and grease, heavy metals, nutrients, base/neutral and acid extractibles, pesticides, herbicides, and petroleum hydrocarbon components.

The County of Orange has an active surface water quality monitoring program in the permitted area. Dry weather sampling is performed bimonthly and wet weather sampling is performed only during significant storm events (>0.5 inches of rainfall). Stormwater runoff samples collected are analyzed for nutrients, trace metals, total coliform, oil and grease, specific conductance, dissolved oxygen, temperature, and pH. Sediment samples are also collected and analyzed for radiochemical constituents (only at Huntington Harbour), organics, and metals on a semi-annual basis. This monitoring program includes 21 water quality monitoring stations, 17 water level stations (12 of which are stream gaging stations),

EXISTING FACILITIES AND PROGRAMS - CONT'D

and 31 precipitation stations. Most of the water quality monitoring stations are located at storm drain systems associated with drainage areas in which land use activities have been identified to significantly impact the beneficial uses of waters in Orange County. These drainage areas, characterized as residential, agricultural, commercial, and industrial, are mainly located upstream of Newport Bay. Those pollutants that have been identified to cause significant impairment to the beneficial uses of Newport Bay include nutrients (especially nitrates), pesticides, herbicides, and suspended solids. The sources of these pollutants are not fully identified. To protect the beneficial uses of waters of the state, the pollutants from all sources need to be controlled. Recognizing this, and the fact that stormwater discharges contain significant amounts of pollutants, the County of Orange, the incorporated cities of Orange County, and the Regional Board have all agreed that an areawide stormwater permit is the most effective way to develop and implement a comprehensive stormwater management program in a timely manner. This areawide stormwater permit will contain requirements with time schedules that will allow the County of Orange and the cities to address water quality problems caused by stormwater/urban runoff and to develop and implement management programs to reduce pollutants in stormwater system discharges and improve the water quality of the receiving waters.

PERMIT REQUIREMENTS

In accordance with Section 402(p)(3), as part of a program to reduce the pollutants in stormwater system discharges to the maximum extent practicable, the dischargers are required to submit existing management plans and programs being implemented in the localities, and information that could lead to successful identification of illegal discharges and sources of pollutants in stormwater system discharges. In addition, the dischargers will be required to adopt and implement effective management programs and control measures in accordance with time schedules approved by the Executive Officer of the Regional Board.

If existing management programs are not effective in controlling pollutant loading and achieving the water quality objectives of the receiving waters, additional programs shall be developed and implemented.

PERMIT REQUIREMENTS - CONT'D

The permit also requires development and implementation of management programs (best management practices[1]) during the life of the permit such that the quality of stormwater discharged can be improved and the water quality objectives of the receiving waters can be met ultimately. It is also expected that the beneficial uses of the receiving waters will be protected through implementation of best management practices.

Currently, the County of Orange has 21 monitoring stations throughout the system. **The proposed order requires the dischargers to submit a stormwater system monitoring program that will meet the objectives, as outlined in Item VII.1., of the program.**

BENEFICIAL USES

Stormwater flows which are discharged to 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 supply, groundwater recharge, navigation, water contact recreation, non-contact water recreation, ocean commercial and nonfreshwater sportfishing, warm freshwater habitat, cold freshwater habitat, preservation of areas of biological significance, wildlife habitat, preservation of rare and endangered species, marine habitat, and shellfish harvesting. The ultimate goal of this stormwater management program is to protect the beneficial uses of the receiving waters.

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 the stormwater discharges. The Regional Board strongly believes 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

ANTIDEGRADATION ANALYSIS

quality of stormwater discharges and receiving waters will be improved, thereby protecting the beneficial uses of waters of the United States. This discharge is consistent with the federal and state antidegradation requirements and a complete antidegradation analysis is not necessary.

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[1] Best Management Practices (BMPs) are water quality management practices that are maximized in efficienc [illegible] control of stormwater runoff pollution.

ANTIDEGRADATION ANALYSIS

quality of stormwater discharges and receiving waters will be improved, thereby protecting the beneficial uses of waters of the United States. This discharge is consistent with the federal and state antidegradation requirements and a complete antidegradation analysis is not necessary.

PUBLIC WORKSHOP

The Regional Board recognizes the significance of Orange County's Stormwater/Urban Runoff Management Program and will conduct a workshop to provide for public involvement and participation in the development and implementation of the tentative waste discharge requirements. The purpose of the workshop is solely to solicit comments. The workshop will be held on Friday, June 8, 1990, at 9:30 a.m. at Hofert Hall, 39707 Big Bear Boulevard in Big Bear Lake. Public comments received at the workshop and during the comment period will be incorporated into the proposed waste discharge requirements, which will be considered for adoption at a subsequent Board meeting.

The Regional Board will conduct at least one workshop every year during the term of this permit to discuss the progress of the stormwater management program. The details of the annual workshop will be 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 permit may register their name, mailing address and phone number with the Regional Board office at the address given below.

PUBLIC HEARING

The Regional Board will hold a public hearing regarding the proposed waste discharge requirements. The public hearing is scheduled to be held on Friday, July 13, 1990, at 9:00 p.m. at the City Council Chambers in Riverside. Further information regarding the conduct and nature of the public hearing concerning these waste discharge requirements may be obtained by writing or visiting the Santa Ana Regional Board office, 6809 Indiana Avenue, Suite 200, Riverside.

WRITTEN COMMENTS

Interested persons are invited to submit written comments on the proposed waste discharge requirements and the Executive Officer's proposed determinations. Comments should be submitted by June 22, 1990, either in person or by mail to:

Joanne Lee
California Regional Water Quality Control Board
Santa Ana Region
6809 Indiana Avenue, Suite 200
Riverside, CA 92506-4298

INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Joanne Lee at (714)782-4130. 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 10:00 a.m. and 4:00 p.m., Monday through Thursday (excluding holidays).

REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group of applications may leave his name, 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.

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. 96-31
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 Run-off
Orange County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. On December 30, 1994, 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, 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), submitted National Pollutant Discharge Elimination System (NPDES) Application No. CA 8000180 and a Report of Waste Discharge for reissuance of their areawide storm water NPDES permit.

2. Section 402(p) of the federal Clean Water Act (CWA), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges from separate municipal storm drain systems, storm water discharges associated with industrial activity (including construction activities), and designated storm water discharges which are considered significant contributors of pollutants to waters of the United States (U.S.). On November 16, 1990, the United States Environmental Protection Agency (hereinafter US EPA) published regulations (40 CFR Parts 122, 123 and 124) which describe permit application requirements for storm water discharges pursuant to Section 402(p) of the CWA. Prior to EPA's promulgation of the final storm water regulations, the three counties (Orange, Riverside, and San Bernardino) and the incorporated cities within the jurisdiction of the Santa Ana Region requested areawide NPDES permits for urban storm water run-off.

3. On July 13, 1990, the Regional Board adopted Order No. 90-71 for urban storm water run-off 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. 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. Order 90-71 expired on July 1, 1995.

RB8 000045

4. Order No. 90-71 required the permittees to develop and implement a drainage area management plan (DAMP) and a storm water and receiving water monitoring plan, to eliminate illegal and illicit discharges to the storm drain systems and to 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 run-off to the maximum extent practicable (MEP)[1].

5. This order outlines the next step toward an effective program and specifies requirements to protect the beneficial uses of the waters of the U. S. The intent of this permit is to regulate pollutant discharges, identify and focus on those areas which threaten the beneficial uses and improve water quality in the Region in a timely manner. This order regulates urban storm water run-off[2] from areas under the jurisdiction of the permittees.

6. The Report of Waste Discharge (the permit renewal application) included the following major components:

   a. Summary of status of current Storm Water Management Program
   b. Proposed Plan of Storm Water Quality Management Activities for 1995-2000
   c. The Drainage Area Management Plan
   d. A Model Water Quality Ordinance
   e. An Enforcement Consistency Guide
   f. A Reconnaissance Survey Field Inspection and Documentation Manual

7. The permittees serve a population of approximately 2.6 million, occupying an area of approximately 511 square miles (including both unincorporated areas and the limits of 31 cities). 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. The project area is shown on Attachment A. 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 currently regulated under an order issued by that Board.

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[1] Maximum Extent Practicable (MEP) means to the maximum extent possible, taking into account equitable considerations of synergistic, additive, and competing factors, including but not limited to, gravity of the problem, fiscal feasibility, public health risks, societal concerns, and social benefits.

[2] Urban storm water run-off includes those discharges from residential, commercial, industrial and construction areas within the permitted area and excludes discharges from feedlots, dairies and farms.

8. The permittees may lack legal jurisdiction over storm water discharges into their systems from some of the 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.

9. Storm water discharges consist of surface run-off generated from various land uses in all the hydrologic drainage areas which 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 illegal disposal practices/illicit connections. Nationwide studies in urban areas have shown that urban run-off typically contains significant quantities of pollutants. Preliminary results from urban storm water monitoring programs within the permitted area indicate that the major pollutants of concern are certain heavy metals, sediment, chemical oxygen demand (COD), pesticides, herbicides, and nutrients.

   The 1989, 1991, and 1994 Water Quality Assessments by the Regional Board identified impairment of a number of water bodies within the permitted area. The beneficial uses of these water bodies have been found to be threatened or impaired due to point and non-point source discharges.

10. Certain activities that generate pollutants present in storm water runoff are 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. Storm water discharges to the storm drain systems in Orange County 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 Harbor and Bolsa Bay drainage area, the Greenville-Banning Channel drainage area, the Santa Ana River drainage area, and the Newport Bay drainage area (see Attachment B). These watersheds are tributary to the Pacific Ocean. The surface water bodies in Orange County include:

   <u>Inland Surface Streams</u>

   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 to these washes,

Bays, Estuaries, and Tidal Prisms

g. Anaheim Bay,

h. Sunset Bay,

i. Bolsa Bay and Bolsa Chica Ecological Reserve,

j. Lower and Upper Newport Bay,

k. Tidal Prism of Santa Ana River (to within 1000 feet of Victoria Street) and Newport Slough, Santa Ana Salt Marsh,

l. Tidal Prism of San Gabriel River (River Mouth to Marina Drive),

m. Tidal Prisms of Flood Control Channels Discharging to Coastal or Bay Waters (e.g. Huntington Harbor),

Ocean Waters

Nearshore Zone

n. San Gabriel River to Poppy Street in Corona Del Mar,

o. Poppy Street to Southeast Regional Boundary,

Offshore Zone

p. Waters between Nearshore Zone and Limit of State Waters,

Lakes and Reservoirs

q. Irvine Lake (Santiago Reservoir), and

r. Laguna, Peters Canyon, and Rattlesnake Reservoirs.

11. (cont'd)
The beneficial uses of these water bodies include: municipal and domestic supply, agricultural supply, industrial service 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.

12. 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. Within the Region, generally the San Bernardino County drainage areas drain to the Riverside County drainage areas, and Riverside County drainage areas discharge to Orange County.

13. Within the Region, run-off 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.

14. The three county areas within this Region are regulated under three areawide permits for urban storm water run-off. 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.

15. 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)[3] are not implemented;

    b. Construction sites where erosion and siltation controls and BMPs are not implemented; and

    c. Urban run-off where the drainage area is not properly managed.

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[3] Best Management Practices (BMPs) are water quality management practices that are maximized in efficiency for the control of storm water run-off pollution.

16. To address the industrial and construction sites, the State Board issued two statewide general NPDES permits: one for storm water run-off from industrial sites (NPDES No. CAS000001, General Industrial Activities Storm Water Permit) and the second one for storm water run-off from construction sites (NPDES No. CAS000002, General Construction Activity Storm Water Permit). In addition, the Regional Board adopted Order No. 94-005, NPDES NO. CA 8000279, for storm water run-off from facilities owned and/or operated by Caltrans, which includes freeways and highways, and Order 94-7, NPDES No. CA 8000336 for concentrated animal feeding operations, including dairies. The Regional Board issued and continues to issue individual storm water permits for certain industrial facilities within the Region.

17. One of the major components of these statewide permits and the Caltrans permit is the development and implementation of a storm water pollution prevention plan (SWPPP).

18. Most industrial activities (some light industrial activities are exempt) and construction sites on five acres or more are required to get coverage under these statewide general permits.

19. The Regional Board administers compliance with the State's General Industrial Activities Storm Water Permit and the General Construction Activity Storm Water Permit. However, in most cases, the industries and construction sites discharge into storm drains and/or flood control facilities owned and operated by the permittees. These industries and developers are also regulated under local laws and regulations. Therefore, a coordinated effort of the permittees and the Regional Board staff is critical to avoid duplicative and overlapping storm water regulatory activities. A memorandum of understanding between the permittees and the Regional Board may be appropriate to efficiently implement the storm water regulations for industries and construction sites at the local level.

20. The permittees have agreed to continue to notify Regional Board staff when conditions are observed during their routine activities which result in a threat or potential threat to water quality. This also includes failure to obtain coverage under the general storm water permits.

21. The permittees have developed project conditions of approval for new developments to be implemented at the time of grading or building permit issuance for individual sites on five acres or more, with the intent to comply with the General Construction Activity Storm Water Permit.

22. The permittees own/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. As part of this order, the permittees will prepare an environmental performance report for appropriate public facilities under their jurisdiction, and develop and implement 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.

23. 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).

24. The major focus of storm water pollution prevention is the development and implementation of appropriate drainage area management plan (DAMP) including best management practices (BMPs). The ultimate goal of the urban storm water management program is to support attainment of water quality consistent with the water quality objectives for the receiving waters in order to protect beneficial uses through the implementation of the DAMP. The permittees developed and submitted a DAMP for approval, which was approved on May 3, 1994.

25. The DAMP is a dynamic document and the permittees have implemented, or are in the process of implementing, the various elements of the DAMP. This order requires the permittees to continue to implement the BMPs listed in the DAMP and to effectively prohibit illegal and illicit discharges to the storm drain system.

26. Urban run-off 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.

27. The Orange County DAMP defined a management structure for the permittees' compliance effort, a formal agreement to underpin cooperation, and detailed municipal efforts 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. The DAMP also defined an extensive surface water quality and sediment monitoring program.

28. In order to characterize storm water discharges, to identify problem areas, to determine the impact of urban run-off on receiving waters, and to determine the effectiveness of the various BMPs, an effective monitoring program is critical. From 1990 through 1995, the principal permittee administered the monitoring program for the permittees which included storm water monitoring, receiving water monitoring, dry weather monitoring and sediment monitoring. The permit application included a summary of monitoring data collected during 1991-1994. The monitoring program did not identify any specific pollutant sources which could be targeted for special pollutant control programs. The monitoring data indicated spatial differences in water quality between Orange County's major watersheds. Some of the monitoring data collected to date may be used to develop baseline water quality data for future evaluation of program effectiveness.

29. The Strategic Plan and Initiatives (June 22, 1995) for the State Water Resources Control Board and the Regional Water Quality Control Boards 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 programs. Consistent with this approach, an integrated monitoring program could be developed with the cooperation of all the stakeholders, including the permittees in the three counties, and the Regional Board. The Regional Board will coordinate the activities within the watershed and seek participation of the permittees.

30. Any illegal dumping and illicit/illegal connections and discharges[4] to the storm drains could contribute to storm water and other surface water contamination. A reconnaissance survey of the municipal storm drain systems (open channels and underground storm drains) is being conducted by the permittees. The permittees are required to detect, identify and eliminate illicit/illegal discharges. Additionally, the permittees are also required to develop a program to prohibit illegal/illicit connections to their storm drains and flood control facilities.

31. The County of Orange obtains its authority to control pollutants in storm water discharges, to prohibit illegal discharges/illicit connections, to control spills, and to require compliance and carry out inspections of the storm drain systems in the County of Orange from the Orange County Flood Control Act, Orange County Water Pollution Ordinance, and various county ordinances which address industrial wastes and waste discharges within the unincorporated areas of Orange County and contract cities. 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 run-off discharges.

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[4] 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.

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 is available to the permittees for adoption.

32. 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 County of Orange already requires a Water Quality Management Plan which addresses permanent post-construction BMPs, in addition to the SWPPP required by the statewide general permit for construction activity.

33. 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 (e.g. Fire Department, Building and Safety, Code enforcement, etc.). As such, these organizations are expected to actively participate in implementing this areawide storm water program.

34. 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 control the discharge of pollutants in urban run-off to waters of the U. S. to the maximum extent practicable.

35. 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 run-off solely through traditional end-of-pipe treatment. However, it is the Regional Board's intent that this order shall achieve attainment and protection of the beneficial uses of receiving waters. This order, therefore, includes Receiving Water Limitations required to implement water quality objectives and to prevent nuisance and 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 approved DAMP that will reduce pollutants in storm water discharges to the maximum extent practicable. The Receiving Water Limitations require the implementation of control measures that are technically and economically feasible as necessary to protect beneficial uses and attain water quality objectives of the receiving waters.

36. The Regional Board finds that the unique aspects of the regulation of storm water discharges through municipal storm sewer systems, including intermittent discharges, difficulties in monitoring and limited physical control over the discharge, will require adequate time to implement and evaluate the effectiveness of best management practices and to determine whether they will adequately protect receiving waters. Therefore, the permit includes a procedure for determining whether storm water discharges are causing

continuing and recurring exceedances of receiving water limitations and for evaluating whether the DAMP must be revised. The permittees will be in compliance with the Receiving Water Limitations so long as it complies with that procedure.

37. 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).

38. The requirements contained in this order are necessary to implement the plans and policies described in Finding 36, above. These plans and policies contain numeric and narrative water quality standards for the water bodies in this Region. This order does not contain numeric effluent limitations for any constituents because the impact of the storm water discharges on the water quality of the receiving waters has not yet been fully determined. Continuation of water quality/biota monitoring and analysis of the data are essential to make that determination.

39. 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.

40. The permittees have developed a Storm Water Implementation Agreement between the County, its cities and the Orange County Flood Control District as required under Order No. 90-71.

41. The storm water regulations require public participation in the storm water management program development and implementation. 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. In considering the public comments, the permittees may modify reports, plans, or schedules prior to submittal to the Executive Officer.

42. 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.

43. The Regional Board has considered anti-degradation requirements, pursuant to 40 CFR 131.12 and State Board Resolution 68-16, for this discharge. The Regional Board finds that the storm water discharges are consistent with the federal and state anti-degradation requirements and a complete anti-degradation analysis is not necessary.

44. 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.

45. 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 of the storm drain system outfalls as agreed upon by the Executive Officer of the Regional Board.

2. Develop criteria for inspections of the municipal separate storm drain systems.

3. Conduct inspections of the storm drain systems within its jurisdiction.

4. Implement management programs (within its jurisdiction), monitoring programs, and related plans as required by this order.

5. Enact and revise policies/ordinances necessary to establish legal authority as required by the Federal Storm Water Regulations.

6. Respond and/arrange for responding to emergency situations such as accidental spills, leaks, illegal discharges/illicit connections, etc. to prevent or reduce the discharge of pollutants to storm drain systems and waters of the U.S.

7. Prepare and submit to the Executive Officer of the Regional Board unified reports, plans, and programs as required by this order.

The activities of the principal permittee should include, but not be limited to, the following:

8. Coordinate permit activities and participate in any subcommittees formed as necessary, to coordinate compliance activities with this order.

9. Provide technical and administrative support and inform the co-permittees of the progress of other pertinent municipal programs, pilot projects, research studies, etc.

10. Coordinate the implementation of areawide storm water quality management activities such as public education, pollution prevention, household hazardous waste collection, etc.

11. Develop and implement mechanisms, performance standards, etc., to promote uniform and consistent implementation of BMPs among the permittees.

12. 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.

13. In conjunction with the other permittees, implement the BMPs listed in the approved DAMP.

14. Monitor the implementation of the plans and programs required by this order and determine their effectiveness in protecting beneficial uses.

15. Coordinate all the activities with the Regional Board including the submittal of all reports, plans, and programs as required under this order.

16. Obtain public input for any proposed management and implementation plans where applicable.

17. 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 as required by Order No. 96-31.

2. Adopt the Orange County Water Quality Ordinance or the equivalent legislation necessary to establish and maintain adequate legal authority as required by the Federal Storm Water Regulations.

3. Conduct storm drain system inspections in accordance with the criteria developed by the principal permittee.

The co-permittees' activities should include , but not be limited to, the following:

4. Participate in committees or subcommittees formed by the principal permittee to address storm water related issues to comply with this order.

5. Review, approve, implement, and comment on all plans, strategies, management programs, monitoring programs, as developed by the principal permittee or any subcommittee to comply with this order.

6. Pursue enforcement actions as necessary to ensure compliance with the storm water management programs, ordinances and the implementation plans including physical elimination of undocumented connections and illicit discharges.

7. Conduct and coordinate with the principal permittee any surveys and characterizations needed to identify the pollutant sources and drainage areas.

8. Submit storm drain system maps with periodic revisions as necessary.

9. Respond to emergency situations such as accidental spills, leaks, illegal discharges/illicit connections, etc. to prevent or reduce the discharge of pollutants to storm drain systems and waters of the U.S.

10. Prepare and submit all reports to the principal permittee in a timely manner.

III. DISCHARGE LIMITATIONS

1. The permittees shall prohibit illicit/illegal discharges from entering into the municipal separate storm sewer systems (municipal storm drain systems) and require controls to reduce the discharge of pollutants to the maximum extent practicable.

2. The discharge of storm water from permittees' municipal storm drain systems to waters of the United States containing pollutants which have not been reduced to the maximum extent practicable is prohibited.

3. The following discharges need not be prohibited by the permittees unless identified by the permittees as a source of pollutants to the receiving waters.

   a. discharges composed entirely of storm water,

b. covered by NPDES permits or written clearances issued by the Regional or State Board
c. from potable water line flushing and other potable water sources,
d. fire hydrant testing and flushing,
e. air conditioning condensation,
f. landscape irrigation, lawn garden watering and other irrigation waters,
g. passive foundation drains,
h. passive footing drains,
i. water from crawl space pumps,
j. dechlorinated swimming pool discharges,
k. non-commercial vehicle washing,
l. diverted stream flows,
m. rising ground waters and natural springs,
n. ground water infiltration as defined in 40 CFR 35.2005 (20) and uncontaminated pumped groundwater,
o. flows from riparian habitats and wetlands,
p. street wash water and run-off from fire fighting (program descriptions shall address discharges or flows from fire fighting only where such discharges are identified as significant sources of pollutants to waters of the United States),
q. waters not otherwise containing wastes as defined in California Water Code Section 13050 (d), and
r. other types of discharges identified and recommended by the permittees and approved by the Regional Board.

For purposes of this order, a discharge may include storm water and other types of discharges as indicated above.

4. If it is determined by the permittees that any of the preceding discharges cause or contribute to violations of water quality standards or are significant contributors of pollutants to waters of the U.S., the permittees shall prohibit these discharges from entering the storm drain system.

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 Item 3., above. If permitting or immediate elimination of the non-storm water discharges is impractical, the permittees shall include in the Environmental Performance Report, required under Section V., Provision 18., of this order, a proposed plan to eliminate the non-storm water discharges in a timely manner.

6. The permittees shall reduce the discharge of pollutants to the storm water conveyance systems to the maximum extent practicable.

IV. RECEIVING WATER LIMITATIONS

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 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 1.a.

   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:

      i. The Executive Officer will evaluate the adequacy of the permittees' implementation of the approved DAMP based on the permittees' submitted reports and other relevant information. The Executive Officer will determine if implementation of the approved DAMP has a reasonable likelihood of preventing future continuing or recurring impairment of beneficial uses or exceedances of water quality objectives resulting from urban storm water discharges. If the Executive Officer makes this determination, the permittees are required to continue implementing the approved DAMP.

      ii. If the Executive Officer determines that implementation of the approved DAMP will not have a reasonable likelihood of preventing future impairment of beneficial uses or exceedances of water quality objectives, the permittees shall, upon notice from the Executive Officer, do the following:

         A. Submit a report that includes an evaluation of the relative contribution of the urban storm water discharges to the impairment of beneficial uses or the exceedances of water quality objectives. The report shall address the persistence, the significance, and to the extent feasible, the causes of the impairment or exceedance, and the technical and economic feasibility of control actions available to the permittees to reduce or eliminate the impairment or exceedance.

B. Submit a report reviewing the approved DAMP to determine whether it should be revised so that there will be a reasonable likelihood of preventing future continuing or recurring beneficial use impairment or exceedances of water quality objectives, or whether revisions to achieve protection of beneficial uses or attainment of water quality objectives are technically or economically infeasible. If the report recommends revision of the approved DAMP, the report shall include a work plan to revise the plan so that it will have a reasonable likelihood of preventing future continuing or recurring beneficial use impairment or exceedance or water quality objectives. If the report concludes that no revisions are necessary to achieve protection of beneficial uses or attainment of water quality objectives, the report shall explain how implementation of the approved DAMP will achieve compliance. If the report determines that revisions to achieve protection of beneficial uses or attainment of water quality objectives are technically or economically infeasible, the permittees shall continue to comply with the DAMP, shall fully document this determination and shall make recommendations for actions to achieve compliance.

C. The permittees shall implement the work plan and the revised DAMP as approved by the Executive Officer.

2. The Executive Officer shall review and approve or disapprove the reports required under Receiving Water Limitation 1. The reports may be submitted as part of the next Annual Report, or at some other time designated by the Executive Officer. So long as the permittees have complied with the procedures set forth in Receiving Water Limitation 1, they do not have to repeat the procedure for continuing or recurring exceedances of the same receiving water limitations. As appropriate, any determinations under this part or revisions to the approved DAMP may be considered by the Regional Board in a public meeting.

V. PROVISIONS

GENERAL

1. Permittees shall demonstrate compliance with all the requirements in this order and specifically with Section III. Discharge Limitations and Section IV. Receiving Water Limitations, through timely implementation of their approved Drainage Area Management Plan (DAMP) and any approved modifications, revisions, or amendments developed pursuant to this order. The approved DAMP, as included in the Report of Waste Discharge, including any approved amendments thereto, is hereby made an enforceable component of this order.

2. The permittees shall implement all elements of the approved DAMP. Where the dates are different than those of the order, the dates in the 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 in a timely manner.

3. The permittees shall comply with Monitoring and Reporting Program No. 96-31 which is hereby made a part of this order and any revisions thereto. The Executive Officer is authorized to revise the Monitoring and Reporting Program and also to allow the permittees to participate in regional, statewide, national or other monitoring programs in lieu of Monitoring and Reporting Program No. 96-31.

4. Upon approval by the Executive Officer of the Regional Board, all plans, reports and subsequent amendments as 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.

5. The permittees shall report to the Executive Officer of the Regional Board:

   a. Any enforcement actions and discharges of storm or wastewaters, 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 U.S.

6. The permittees shall not issue any grading permit for construction activities which will disturb five 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) until proof of coverage with the State's General Construction Activity Storm Water Permit is verified. The proof of coverage may include a letter from the Regional Board office, a copy of the Notice of Intent, Waste Discharger Identification number, etc.

7. The permittees shall identify all illegal and or illicit connections by February 1, 1997 and submit a report of the findings by February 28, 1997 including a schedule for elimination of any identified illicit connection and for periodic inspections of the storm drain facilities.

8. 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.

IMPLEMENTATION AGREEMENT

9. No later than May 31, 1996, the permittees shall submit to the Executive Officer of the Regional Board a copy of the existing Storm Water Program Implementation Agreement with authorized signatures of each of the permittees. Any further revisions to the implementation agreement shall be forwarded to the Executive Officer of the Regional Board within 30 days of approval by the permittees.

LEGAL AUTHORITY

10. The permittees shall adopt the proposed Water Quality Ordinance, or its equivalent. The permittees shall review their existing grading and erosion control ordinances and determine the need for any revision. Upon adoption of the ordinances, but no later than July 31, 1997 each permittee shall certify to the Regional Board that it has adequate legal authority to control the discharges of pollutants into the municipal storm drain system and that it has satisfied the requirements of 40 CFR Section 122.26(d)(2)(i)(A-F). The certification may be submitted jointly by all permittees.

ENFORCEMENT/COMPLIANCE STRATEGY

11. The Permittees shall implement the Enforcement Consistency Guide, dated 8/15/94, or an equivalent enforcement strategy, in order to enforce the Water Quality Ordinance. Upon implementation, but no later than July 31, 1997, each permittee shall certify to the Regional Board that the guide or similar policies are in place for their enforcement staff. Before implementation, this guide and its equivalent must include the following:

    a. A mechanism to determine compliance of industrial facilities, commercial facilities, and construction sites with storm water ordinances and concerns;

    b. A program to monitor and control the pollutants in storm water discharges to the municipal system from industrial facilities that the permittees determines are contributing to a substantial pollutant loading to the municipal storm drain system. The program shall identify priorities and procedures for inspections and establishing and implementing control measures.

12. The permittees shall develop a training program and offer it to the staff of existing industrial and construction inspection programs, to raise concerns with regard to storm water requirements.

13. The permittees will continue to provide notification to the Regional Board regarding storm water related information gathered during site inspections of industrial and construction sites regulated by the Statewide General Storm Water Permits.

PUBLIC EDUCATION AND OUTREACH

14. The permittees will continue to implement the public education efforts already underway and shall implement all of the proposed efforts contained in the permit application. Any proposed changes shall be reported in the Annual Report.

15. When feasible, the permittees shall participate in joint outreach with other programs including, but not limited to, other municipal storm water programs to ensure that a consistent message on storm water pollution prevention is brought to the public.

16. The permittees shall develop public education materials to encourage the public to report illegal dumping from residential, industrial, construction and commercial sites into public streets, storm drains and other water bodies.

17. The permittees shall develop BMP guidance for the control of those potentially polluting activities not otherwise regulated by any agency.

MUNICIPAL FACILITIES

18. The permittees shall prepare an Environmental Performance Report, as stated in the amended DAMP, to address public agency facilities and activities not currently required to obtain coverage under the State's general storm water permits. This report may include 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 are not sources of pollutants into the waters of the U.S. A report shall be submitted to the Executive Officer of the Regional Board by July 31, 1997, identifying the extent of the investigation and all findings of the Environmental Performance Report as it pertains to storm water quality. Thereafter, the permittees shall include in the annual report for each year the actions taken by the permittees to eliminate discharges of pollutants to waters of the U.S., identified by the permittees, at public agency facilities.

MUNICIPAL CONSTRUCTION PROJECTS/ACTIVITIES

19. This order authorizes the discharge of storm water run-off 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.

20. 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.

21. 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.

22. 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.

23. 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.

24. All other terms and conditions of the latest version of the State's General Construction Activity Storm Water Permit shall be applicable.

NEW DEVELOPMENT (INCLUDING RE-DEVELOPMENT)

25. Within 90 days of the issuance of this order, the permittees shall begin implementation of the new development BMPs (DAMP, Appendix G, dated September 1993) and BMPs for public works construction (DAMP, Appendix H) that were developed under Order 90-71. Each permittee shall certify to the Regional Board by November 15, 1996, that these guidelines or the equivalent are being implemented and enforced.

26. Within 120 days of the issuance of this order, the permittees shall review their planning procedures and CEQA document preparation processes to insure that storm water-related issues are properly considered. If necessary, these processes shall be revised to include storm water requirements for evaluation of appropriate mitigation measures.

27. The permittees shall, through conditions of approval, insure 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 shall be identified.

FISCAL RESOURCES

28. The permittees shall prepare and submit a unified fiscal analyses 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.

PERMIT EXPIRATION AND RENEWAL

29. This order expires on March 1, 2001 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 map updates; and

    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.

    d. To incorporate new or revised program elements and compliance schedule(s) necessary to comply with Section IV of this order.

30. 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; or

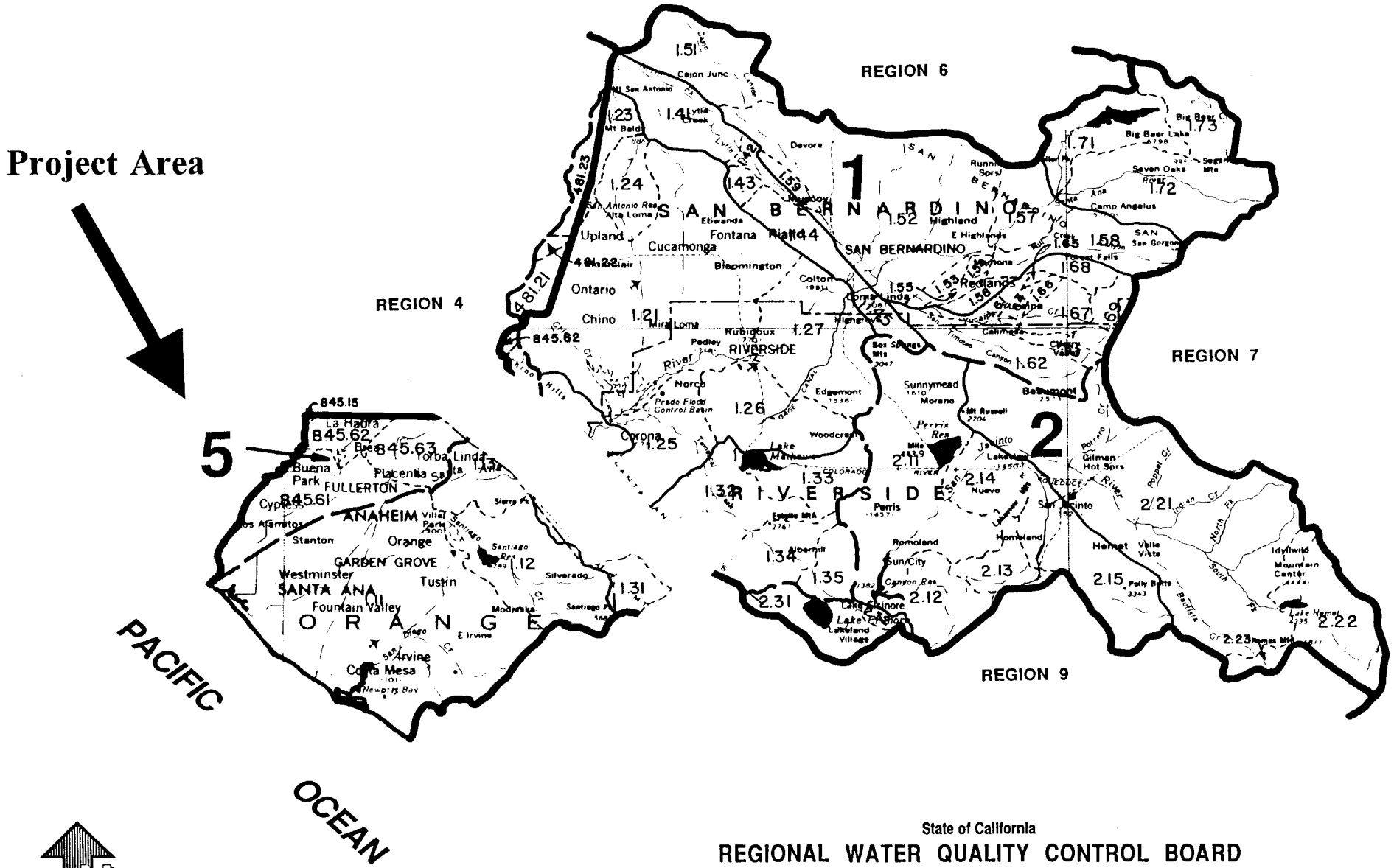
    c. To comply with any applicable requirements, guidelines, or regulations issued or approved under the Clean Water Act, if the requirements, guidelines, or regulations contain different conditions or additional requirements than those included in this order.

31. 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.

32. Order No. 90-71 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 March 8, 1996.

Gerard J. Thibeault
Executive Officer



April 1973
Revised: July 1976
Revised: August 1986

State of California
REGIONAL WATER QUALITY CONTROL BOARD

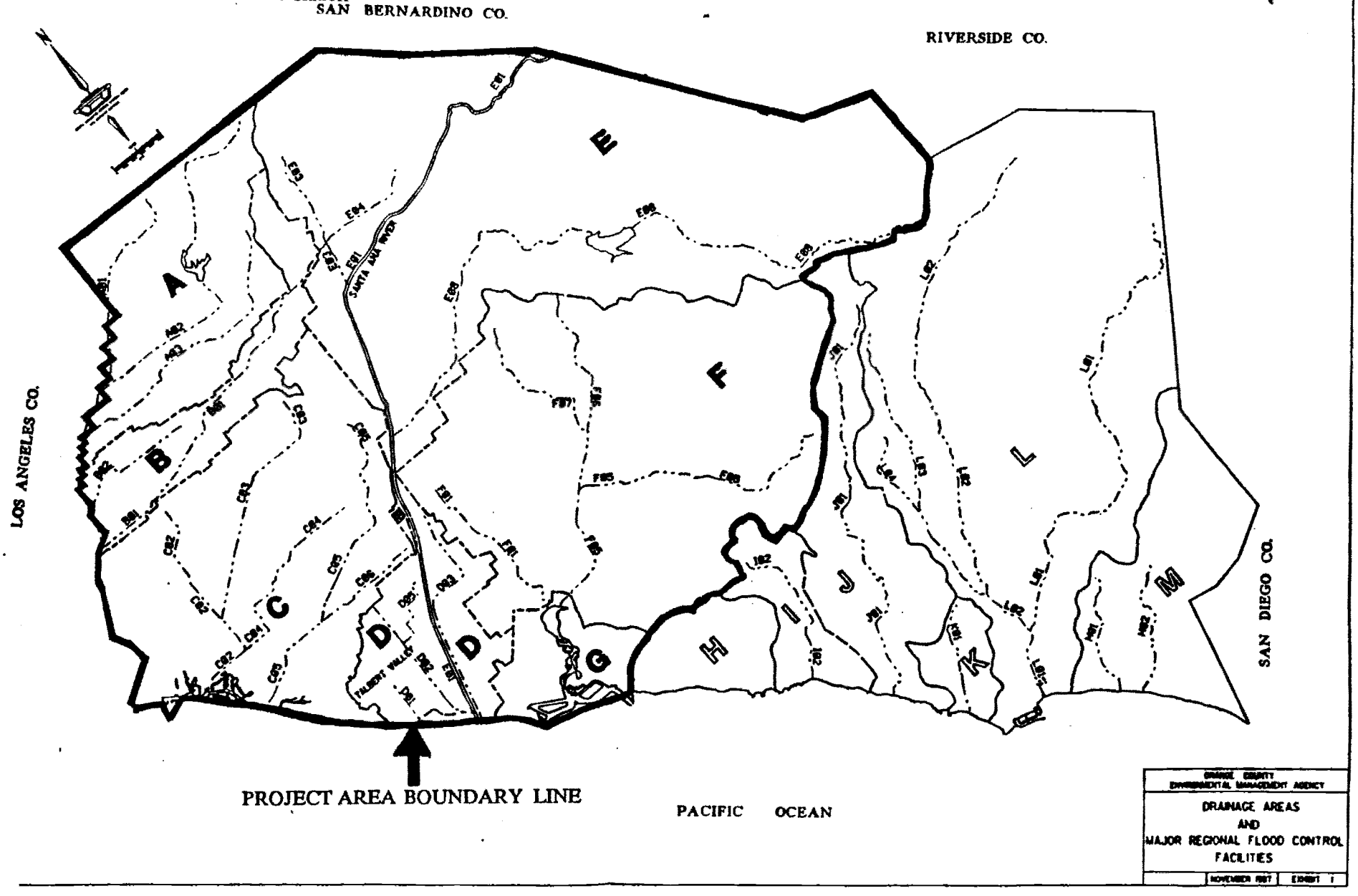
Santa Ana Region (8)

SANTA ANA HYDROLOGIC BASIN PLANNING AREA (SA)

Scale in miles
8 0 8 16 24 32
Scale 1:500,000

RB8 000067

RBSA_37058



LEGEND

A,B - San Gabriel River Drainage Area
C - Huntington Harbour & Bolsa Bay Drainage Area
D - Greenville-Banning Channel Drainage Area
E - Santa Ana River Drainage Area
F,G - Newport Bay Drainage Area

RBSA_37059

Order No. 96-31
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

Order No. 96-31
Attachment "C" (cont'd)

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. 96-31
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 Run-off

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 my 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.

5. The permittees shall implement the Orange County Water Quality Monitoring Program (submitted as part of the permit application) until development and implementation of other acceptable monitoring programs.

II. OBJECTIVES

The overall goal of this monitoring program is to develop and support an effective watershed management program. The following are the major objectives:

1. To develop and support an effective municipal non-point source control program.

2. To define water quality status, trends, and pollutants of concern associated with municipal storm water discharges.

3. To characterize pollutants associated with municipal 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 discharges.

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RBSA 37062

5. To identify other sources of pollutants in storm water run-off 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.

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

The permittees shall develop and submit for approval of the Executive Officer an integrated watershed monitoring program geared towards achieving the above stated goals. This program may be developed in cooperation with the permittees from the San Bernardino and Riverside counties. The Executive Officer or his/her designated representative(s) shall facilitate the coordination meetings or subcommittees formed to achieve this goal. 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:

1. Uniform guidelines for quality control, quality assurance, data collection and data analysis.

2. 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.

3. A description of the monitoring program including:

    a. The number of monitoring stations;

b. Monitoring locations within flood control channels, bays and estuaries, coastal areas, major outfalls, and other receiving waters;

c. Environmental indicators (e.g., ecosystem, biological, habitat, chemical, sediment, stream health, etc.) chosen for monitoring;

d. Parameters selected for field screening and for laboratory work; and

e. 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.), and the type of sampling equipment.

4. A mechanism for analyzing the collected data and interpreting the results including an evaluation of the effectiveness of the management practices, and need for any refinement of the management practices.

5. 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's actions for the next fiscal year; and

g. Major changes in any previously submitted plan/policies.

3. The permittees shall be responsible for the submittal of all required information/materials needed to comply with this order in a timely manner to the principal permittee. All such submittals shall be signed by a duly authorized representative of the permittee under penalty of perjury.

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	DUE DATE
Report on Illicit/Illegal Discharges & Storm Water Program Implementation Agreement	February 28, 1997
Legal Authority & Enforcement Strategy Certification	July 31, 1997
Environmental Performance Report	July 31, 1997
New Development BMP Certification	November 15, 1996
Proposed Monitoring Program	July 31, 1997
Annual Report/Fiscal Analysis	November 15th of each year

Ordered by G J Thibeault
Gerard J. Thibeault
Executive Officer
March 8, 1996

California Regional Water Quality Control Board
Santa Ana Region
2010 Iowa Avenue, Suite 100
Riverside, CA 92507-2409

FACT SHEET

March 8, 1996

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, Storm Water Runoff Management Program, Orange County, Order No. 96-31 (NPDES No. CAS 618030)

PROJECT

The attached pages contain information concerning an application for renewal of waste discharge requirements and a National Pollutant Discharge Elimination System (NPDES) permit, which prescribes waste discharge requirements for urban storm water runoff from the cities and the unincorporated areas in Orange County within the jurisdiction of the Santa Ana Regional Board. On December 30, 1994, 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, 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), submitted National Pollutant Discharge Elimination System (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 previous NPDES permit (Order No. 90-71, NPDES No. CA 8000180) which expired on July 1, 1995. Additionally, the permit application follows guidance provided by staff of the State Water Resources Control Board (State Board) and the Regional Water Quality Control Boards (Regional Boards).

CLEAN WATER ACT REQUIREMENTS

The 1987 amendments to the Clean Water act (CWA) required municipal separate storm drain systems and industrial facilities 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 storm water regulations. Prior to EPA's promulgation of the final storm water regulations, the counties of Orange, Riverside and San Bernardino requested for areawide NPDES permits for storm water runoff. On July 13, 1990, the Regional Board issued Order No. 90-71 to the permittees. This areawide NPDES permit is being considered for renewal by the Regional Board 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 storm water regulations are contained in 40 CFR Parts 122, 123 and 124.

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PROJECT 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 2.6 million, occupying an area of approximately 511 square miles (including both unincorporated areas and the limits of 31 cities). 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 application. 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.

WATERSHED MANAGEMENT

To efficiently manage the water resources of the Region, 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 which 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. Regional Board staff will facilitate coordination of monitoring and management programs among the various stakeholders.

EXISTING PROGRAMS AND FUTURE DIRECTION

As required under Order No. 90-71, the permittees developed a Drainage Area Management Plan (DAMP) which was approved by the Executive Officer of the Regional Board on April 29, 1994. The DAMP includes a number of best management practices and a very extensive public education program. The monitoring program includes 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) may be used to identify problem areas and to evaluate the effectiveness of the DAMPs. The future direction of some of these program elements will depend upon the results of the ongoing studies and holistic approach to watershed management.

Other elements of the storm water management program include identification and elimination of illegal/illicit discharges and establishment of adequate legal authority to control pollutants in storm water discharges. Most of the cities and the County of Orange have completed a survey of their storm drain systems to identify illegal/illicit connections and have adopted appropriate ordinances to establish legal authority. The remaining permittees are in the process of complying with these requirements.

It appears that coordination among the municipal permittees in Orange, Riverside and San Bernardino Counties and a watershed approach to managing storm water are the essential factors in mapping the future course of the storm water program.

BENEFICIAL USES

Storm water flows which 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 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.

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, thereby protecting the beneficial uses of waters of the United States. This is consistent with the federal and state antidegradation requirements and a complete antidegradation analysis is not necessary.

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 permit to promote and discuss the progress of the storm water management program. The details of the workshop will be 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 permit may register their name, mailing address and phone number with the Regional Board office at the address given below.

PUBLIC HEARING

The Regional Board will hold a public hearing regarding the proposed waste discharge requirements. The public hearing is scheduled to be held on Friday, March 8, 1996 at 9:30 a.m. at the Newport Beach City Council Chambers, 3300 Newport Boulevard, Newport Beach, CA. Further information regarding the conduct and nature of the public hearing concerning these waste discharge requirements may be obtained by writing or visiting the Santa Ana Regional Board office, 3737 Main Street, Suite 500, Riverside, CA 92501-3339.

INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Laurie Taul 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 10:00 a.m. and 4:00 p.m., Monday through Thursday (excluding holidays).

REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group for applications may leave his name, 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.

RECOMMENDATION

Adopt Order 96-31, NPDES No. CAS 618030, as presented.

In addition to the permittees, comments were solicited from the following agencies and/or persons:

U. S. Environmental Protection Agency - Robert Wills / Eugene Bromley, Pretreatment, Sludge, and Storm Water Section
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 - Archie Matthews / Bruce Fujimoto, Division of Water Quality
State Department of Water Resources - Glendale
California Regional Water Quality Control Board, North Coast Region (1) - Nathan Quarles
California Regional Water Quality Control Board, San Francisco Bay Region (2) - Tom Mumley
California Regional Water Quality Control Board, Central Coast Region (3) - Adam White
California Regional Water Quality Control Board, Los Angeles Region (4) - Mark Pumford
California Regional Water Quality Control Board, Central Valley Region (5) - Wayne Pierson / Pamela Barksdale
California Regional Water Quality Control Board, Central Valley Region (5R), Redding - Carole Crowe
California Regional Water Quality Control Board, Central Valley Region (5F), Fresno - Darrel Everson
California Regional Water Quality Control Board, Lahontan Region (6SLT), South Lake Tahoe - John Short
California Regional Water Quality Control Board, Lahontan Region (6V), Victorville - Tom Rheiner
California Regional Water Quality Control Board, Colorado River Basin Region (7) - Orlando Gonzales
California Regional Water Quality Control Board, San Diego Region (9) - Deborah Jayne
State Department of Fish and Game - Long Beach
State Department of Health Services - Santa Ana
State Department of Parks and Recreation - Henry R. Agonia
Orange County Health Care Agency - Robert Merryman
South Coast Air Quality Management District, Diamond Bar - James Lents
Caltrans, District 12, Santa Ana - Praveen Gupta
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 - Lt. Col. Bevis
National Forest Service

Uribe And Associates - Pete Uribe
Bill Dendy & Associates - Bill Dendy
Woodward-Clyde - Bob Collacott
The Irvine Company - Sat Tamaribuchi
Building Industry Association - Governmental Affairs Council
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
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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
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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
Sierra Club, Orange County Chapter
Sierra Club, Los Angeles Chapter - Dick Hingson
Natural Resources Defense Council (NRDC)
Cousteau Society
Amigos De Bolsa Chica
Audobon Sea & Sage Chapter
Huntington Beach Wetlands Conservancy
Surfrider Foundation

Newspapers
Orange County Register
Los Angeles Times
Press Enterprise

Major Water/Wastewater Agencies
Santa Ana Watershed Project Authority - Neil Cline
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 - Jason Christie
L.A. County Department of Public Works - Gary Hildebrand
County Sanitation Districts of Orange County - Blake Anderson
Orange County Water District - Bill Mills
Metropolitan Water District - Ed Means

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:

   <u>Inland Surface Streams</u>

   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.

   <u>Bays, Estuaries, and Tidal Prisms</u>

   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

[1] Best Management Practices (BMPs) are water quality management practices that are maximized in efficiency for the control of storm water runoff pollution.

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 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,

[2] Illicit Disposal means any disposal, either intentionally or unintentionally, of material or waste that can pollute storm water or create a nuisance.

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, 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:

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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.

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;

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.

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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.

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 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.

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

[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.

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

[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.

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

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,

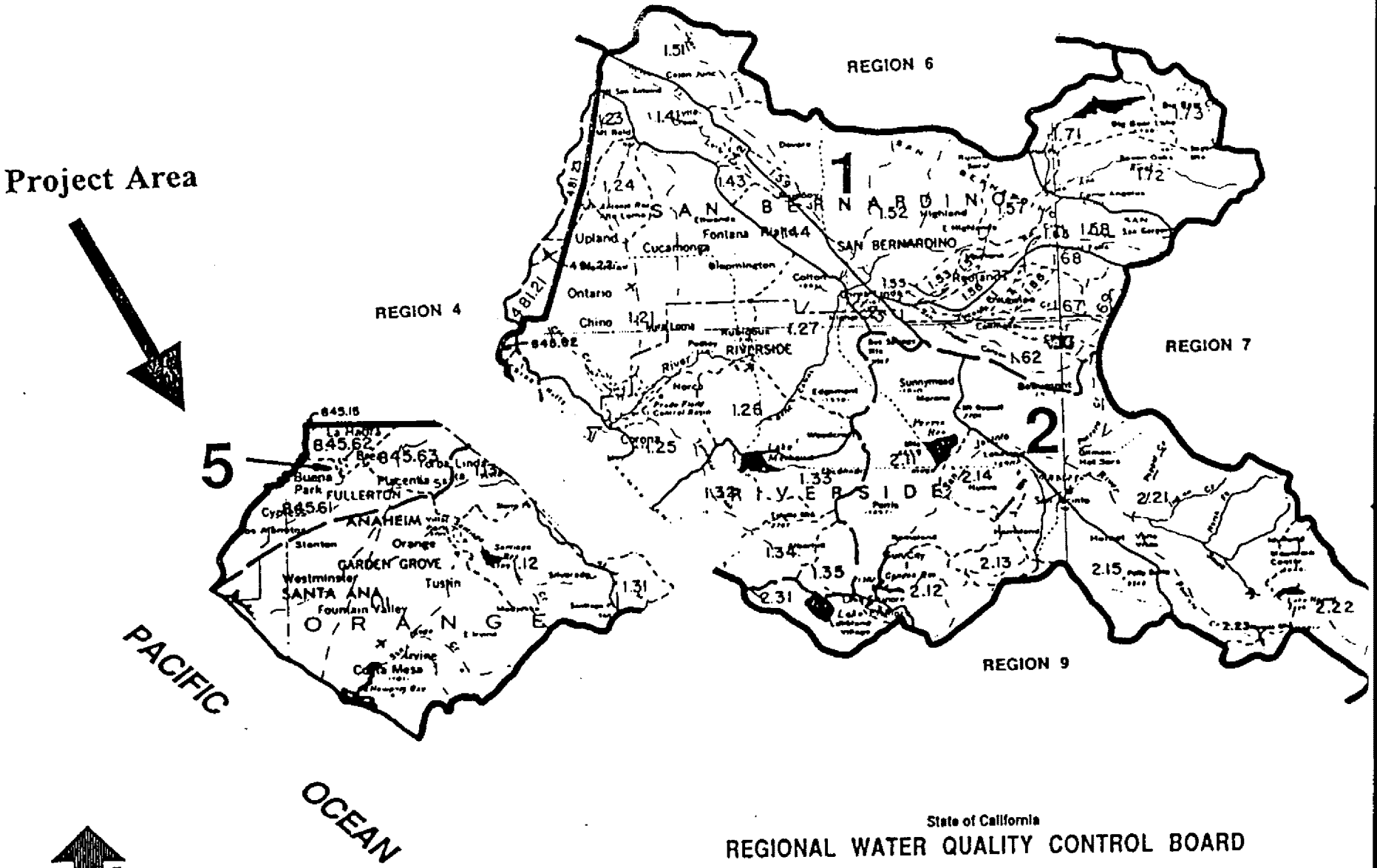
   d. To incorporate any requirements imposed upon the permittees through the TMDL process.

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



State of California
REGIONAL WATER QUALITY CONTROL BOARD

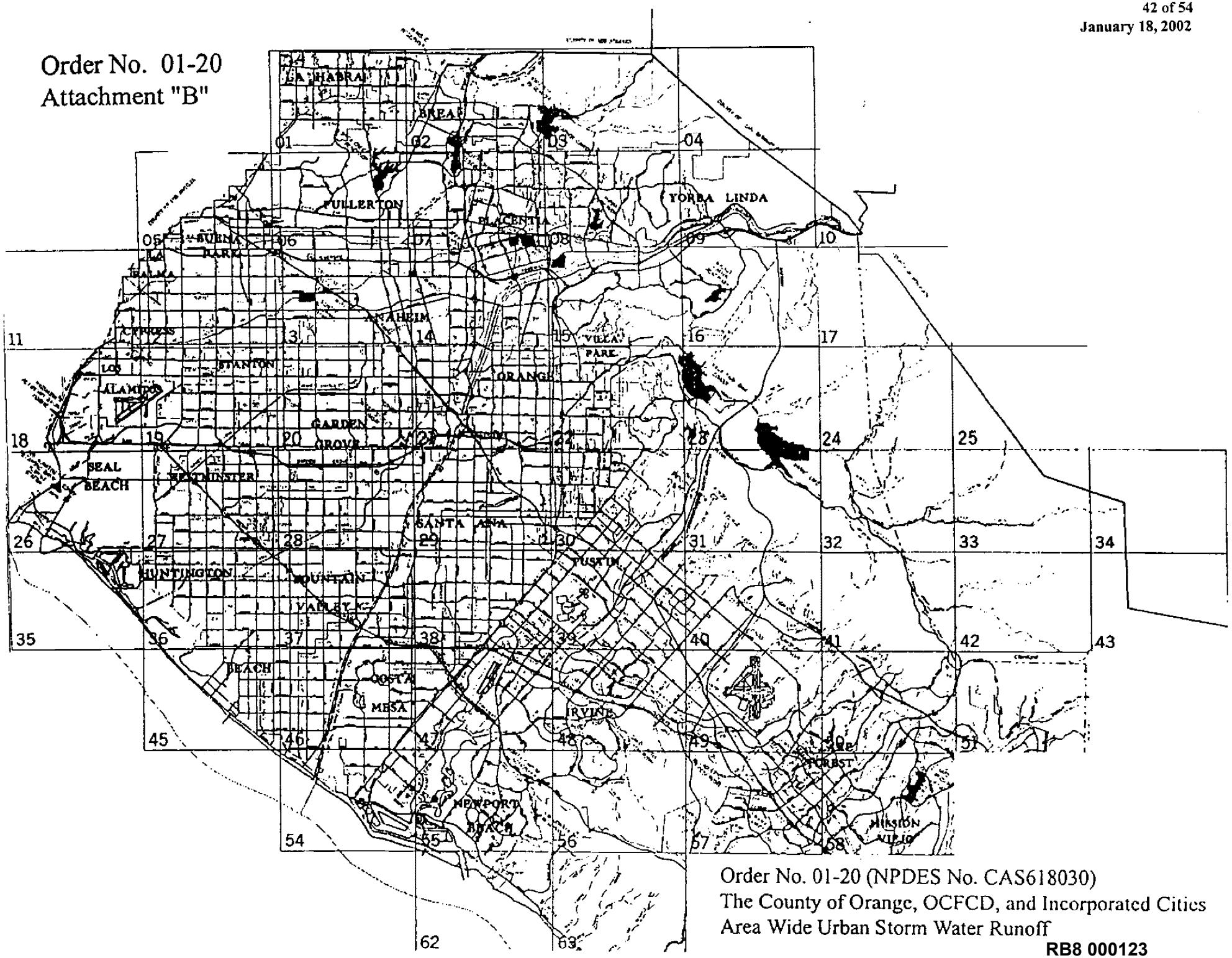
Santa Ana Region (8)

SANTA ANA HYDROLOGIC BASIN PLANNING AREA (SA)

Scale in miles
Scale 1:500,000

April 1973
Revised: July 1976
Revised: August 1986

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.

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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 G J Thibeault

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 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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[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.

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.
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.

[3] Adapted from "Marine Pollution in the United States" prepared for the Pew Oceans Commission, 2001.

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

(This section intentionally left blank.)

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:

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

[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.

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 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.

[5] Los Angeles Times, May 9, 2001

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

California Regional Water Quality Control Board
Santa Ana Region

Winston H. Hickox
Secretary for Environmental Protection

Internet Address: http://www.swrcb.ca.gov/rwqcb8
3737 Main Street, Suite 500, Riverside, California 92501-3348
Phone (909) 782-4130 - FAX (909) 781-6288

Gray Davis
Governor

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at www.swrcb.ca.gov/rwqcb8.

January 29, 2002

Ms. Vicki L. Wilson
Director, County of Orange
Public Facilities & Resources Department
300 North Flower Street
Santa Ana, CA 92702

ADOPTED ORDER NO. R8-2002-0010, NPDES NO CAS618030, AREAWIDE URBAN STORM WATER RUNOFF PERMIT FOR ORANGE COUNTY AND THE INCORPORATED CITIES

Enclosed is a copy of the adopted municipal separate storm sewer system (MS4) permit, Order No. R8-2002-0010, NPDES No. CAS 618030. This order prescribes requirements for the discharge of urban storm water from MS4s to waters of the U.S. This item was adopted at a public hearing during the January 19, 2002 Special Board Meeting. This order supercedes the previous Orange County MS4 permit (Order No. 96-31) and expires on January 19, 2007.

If you have any questions, you may call Marc Brown at (909) 321-4584, Aaron Buck at (909) 782-4469 or Mark Smythe at (909) 782-4998.

Sincerely,

Gerard J. Thibeault
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures: Factsheet
Adopted Order No. R8-2002-0010

cc: Chris Crompton, County of Orange PFRD
Karen Ashby, County of Orange PFRD

Keith Linker, City of Anaheim
Sam Hanna, City of Brea
Douglas Brodowski, City of Buena Park
Maher Nawar, City of Costa Mesa
Gonzalo Vazquez, City of Cypress
Steve Hauerwaas, City of Fountain Valley
Virginia Viado, City of Fullerton
Maria Stipe, City of Garden Grove
Geraldine Lucas, City of Huntington Beach
Mike Loving, City of Irvine
Martin Pastucha, City of La Habra
Ismile Noorgaksh, City of La Palma
Leslie Keane, City of Laguna Woods
Ted Simon, City of Lake Forest
Mike Kim, City of Los Alamitos
Harry Thomas, City of Orange
Dave Kiff, City of Newport Beach
Christopher Becker, City of Placentia
Harry Chin, City of Santa Ana
George Bernard, City of Seal Beach
Mike Kim, City of Stanton
Dana Kasdan, City of Tustin
Gary Johnson, City of Villa Park
Ziad Mazboudi, City of Westminster
Chris Johansen, City of Yorba Linda

State of California
California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. R8-2009-0030
NPDES No. CAS618030

As amended by Order No. R8-2010-0062

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

[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).

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 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:

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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.

a) This order implements federally mandated requirements under Clean Water Act 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, 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 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

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[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).

[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.

States' Nonpoint Source Assessment, 1985" and the Biennial National Water Quality Inventory Reports to Congress cite urban runoff as a major source of 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:

<u>Inland Surface Streams</u>

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

<u>Bays, Estuaries, and Tidal Prisms</u>

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.

[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 90 days of approval of the guidance document, 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,

[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;

[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. By November 22, 2010, the principal permittee shall develop recommendations for streamlining regulatory agency approval of regional treatment control BMPs.

[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.

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 by May 22, 2011, 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 and a model Plan for one watershed shall be prepared by May 22, 2011. 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.

[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).

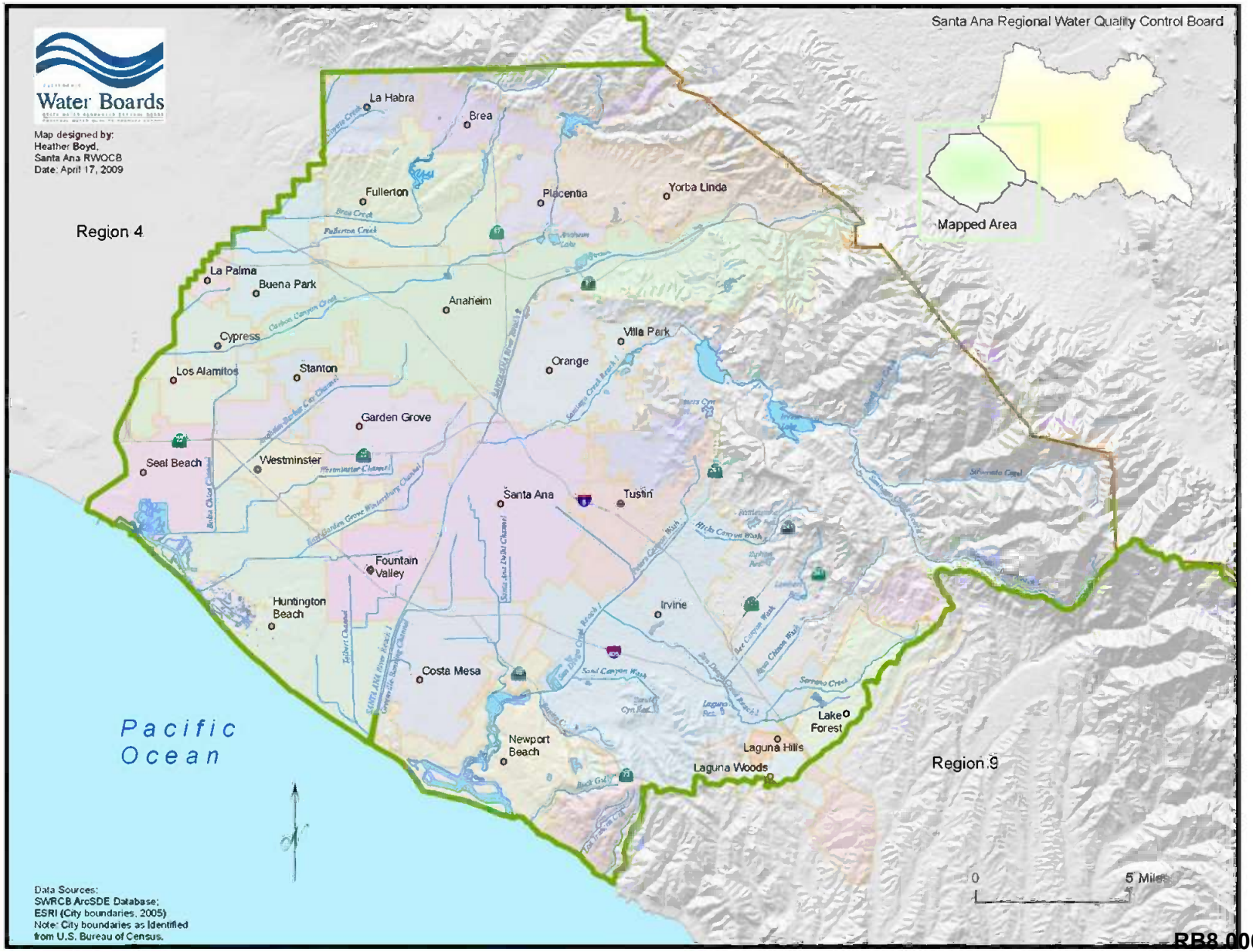
3. This order shall serve as a National Pollutant Discharge Elimination System (NPDES) Permit pursuant to Section 402(p) of the Clean Water Act, or amendments thereto, and shall become effective ten days after the date of its adoption, provided the Regional Administrator of the EPA has no objections. 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.

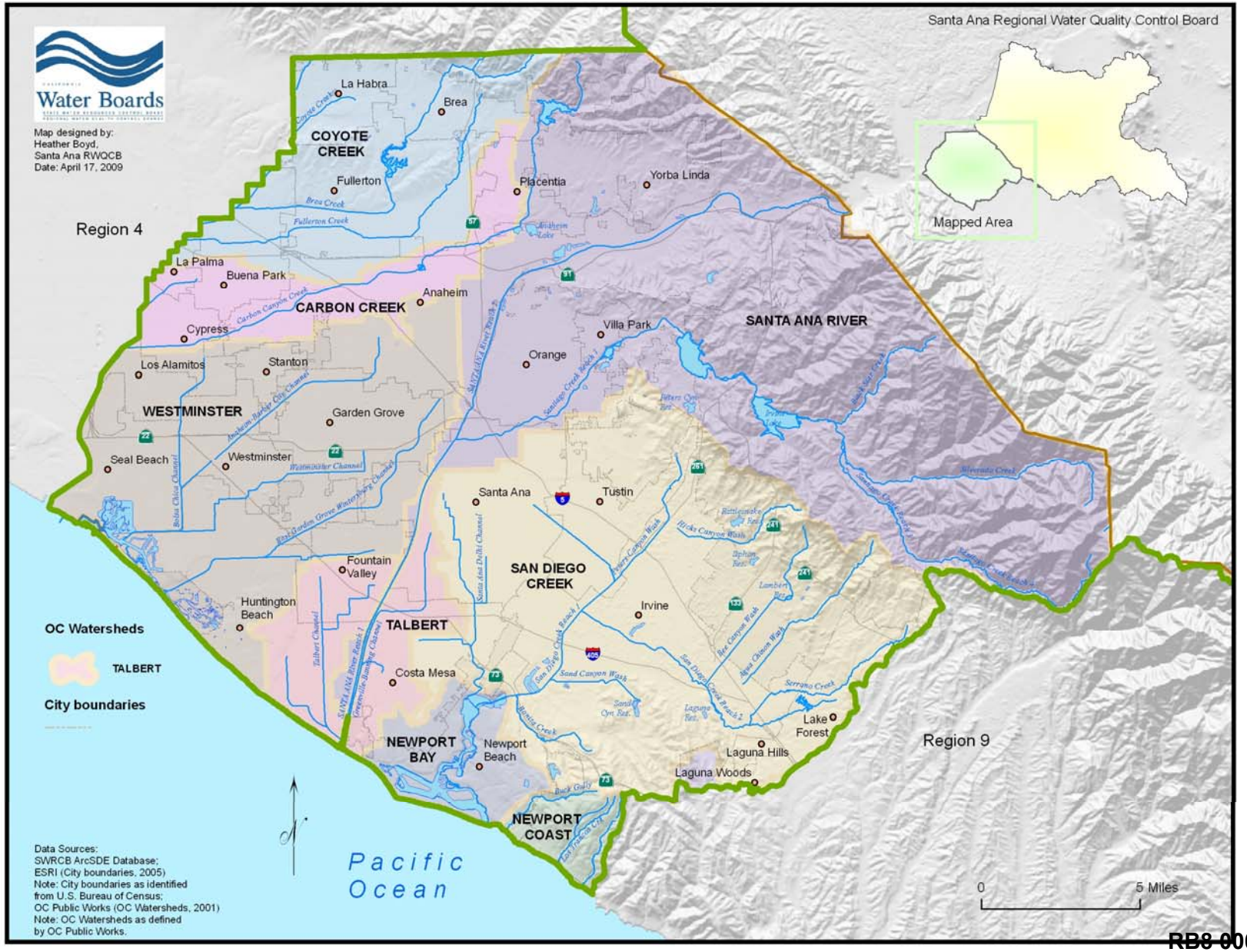
I, Gerard Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on May 22, 2009.

Gerard J. Thibeault
Executive Officer

Order No. R8-2009-0030 (NPDES No. CAS618030) – as amended by Order No. R8-2010-0062
The County of Orange, OCFCD, and Incorporated Cities **Attachment "A"**
Area wide Urban Storm Water Runoff



Order No. R8-2009-0030 (NPDES No. CAS618030) – as amended by Order No. R8-2010-0062
The County of Orange, OCFCD, and Incorporated Cities **Attachment "B"**
Area wide Urban Storm Water Runoff



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

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

State of California
California Regional Water Quality Control Board
Santa Ana Region

Order No. R8-2010-0062

Amending Order No. R8-2009-0030, NPDES No. CAS 618030

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Board), finds that:

1. On May 22, 2009, the Board adopted Order No. R8-2009-0030, NPDES No. CAS 618030, prescribing Waste Discharge Requirements for Areawide Urban Storm Water Runoff for the County of Orange, Orange County Flood Control District and the incorporated cities of Orange County within the Santa Ana Region.

2. On January 29, 2010, the Board adopted Orders No. R8-2010-0033 and R8-2010-0036, prescribing Waste Discharge Requirements for Areawide Urban Storm Water Runoff for the areas of Riverside County and San Bernardino County, respectively, within the Santa Ana Region.

3. While these three Orders address discharges from three distinct municipal separate storm sewer systems (MS4) and there are specific characteristics of these three areas that require different permit language, the intent is that these permits be as similar as possible to provide a uniform set of requirements throughout the Region, with respect to storm water discharges. This commonality will allow collaboration between the municipalities in implementing their storm water programs, thereby reducing costs, and provide a uniform set of requirements for the municipalities in these three areas, as well as for the business and citizens of these municipalities.

4. There are sections in each of the three MS4 permits that are designed to address the effects of pollutant loads that result from new development and significant redevelopment. Those sections require the preparation and submission of an updated Model Water Quality Management Plan (WQMP) and associated documents by each of the counties. These Model WQMPs will describe the Best Management Practices (BMPs) that developers will need to implement for new development and significant redevelopment.

5. Order No. R8-2009-0030 requires that within 12 months of adoption of the Order, the permittees update the Orange County Model WQMP to incorporate low impact development (LID) principles and other appropriate requirements and submit the updated Model WQMP to the Executive Officer for approval. If the Executive Officer has not approved the Model WQMP within 18 months of permit adoption, the project proponents will have to conduct individual analyses of feasibility of LID BMPs for their projects and those analyses finding infeasibility will have to be submitted to the Executive Officer 30 days prior to municipal approval.

6. The Orange County MS4 permittees submitted an updated Model WQMP, Technical Guidance Document and other supplemental documents to the Executive Officer on May 24, 2010, within the 12 months of permit adoption, as required by the permit.

The documents have been reviewed by Board staff and direction has been provided for further improvements of the documents. Once Board staff is satisfied that the documents meet permit requirements, they will be open to a 30-day public comment period, followed by consideration for approval by the Board at a public hearing.

7. Orders No. R8-2010-0033 and R8-2010-0036 each requires that within 18 months of adoption of the Order, the Riverside and San Bernardino County permittees, respectively, update the Model WQMPs for each respective County to incorporate LID principles and other appropriate requirements and submit the updated Model WQMPs to the Executive Officer for approval.

8. The Orange County permittees have requested for an extension of the deadlines specified in their permit for updating the WQMP and other related documents in order to allow effective collaboration between the three counties in preparing their respective Model WQMPs and associated documents. Board staff has reviewed this request and finds that by providing the additional time requested by Orange County (in most cases, a six months extension of the deadlines specified in the permit), all permittees in the three counties could benefit through the collaborative process. The permit is being reopened for the limited purpose of extending the deadlines for submission and approval of the updated WQMP and associated documents.

9. The Orange County permittees must prepare watershed maps identifying hydromodification concerns including the identification of areas where infiltration is possible and appropriate. These maps cannot be prepared until the criteria used to evaluate the appropriateness of infiltration have been approved by the Board. Board staff has reviewed the request that the deadline for submittal of the watershed maps be extended by one year, to May 22, 2011and finds the request reasonable.

10. Title 40 of the Code of Federal Regulations, section 122.62, provides that Order No. R8-2009-0030 may be modified if new information that was not available at the time of permit issuance becomes available, and that the information would have justified different permit conditions at the time of permit issuance. (40 CFR § 122.62, subd. (a)(2).) In this case, the agreement to collectively develop strategies to address the LID provisions in the various MS4 permits occurred after the Board had adopted Order No. R8-2009-0030. Additionally, when the Board adopted Order No. R8-2009-0030, conventional economic wisdom failed to recognize both the nature and the depth of the economic recession. Should the Board have been aware of this information at the time of the adoption of Order No. R8-2009-0030, it would have allowed the Orange County permittees additional time to coordinate its efforts with the permittees within Riverside and San Bernardino Counties in an effort to reduce costs and share implementation strategies.

11. In accordance with Water Code Section 13389, amending wastewater 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.

12. The Board has notified the discharger and other interested agencies and persons of its intent to amend waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.

13. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HERBY ORDERED that Order No. R8-2009-0030 be amended as follows:

1. Order No. R8-2009-0030, page 47 of 93, revise Section XII.A.2 to read:

    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 90 days of approval of the guidance document, 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.

2. Order No. R8-2009-0030, page 52 of 93, revise Section XII.B.6 to read:

    6. By November 22, 2010, 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 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.

3. Order No. R8-2009-0030, page 53 of 93, revise Section XII.C.1 to read:

    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 by May 22, 2011, 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.

4. Order No. R8-2009-0030, page 58 of 93, revise Section XII.D.5, paragraph 3 to read:

    5. The maps and a model plan for one watershed shall be prepared by May 22, 2011. 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 Board, and (6) and water districts.

6. This amendment shall become effective ten days after the date of its adoption, provided the Regional Administrator of the United States Environmental Protection Agency has no objections. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

7. All other terms and conditions of Order No. R8-2009-0030 shall remain unchanged and in full force and effect.

I, Kurt V. Berchtold, Executive Officer, do hereby certify that the forgoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on October 29, 2010.

Kurt V. Berchtold, Executive Officer

June 2, 2017

Paul Emery
City Manager
City of Anaheim
200 S Anaheim Boulevard, Suite 733
Anaheim, CA 92805

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Paul Emery,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Bill Gallardo
City Manager
City of Brea
1 Civic Center Circle
Brea, CA 92821

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Bill Gallardo,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
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Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

James B. Vanderpool
City Manager
City of Buena Park
6650 Beach Boulevard, Second Floor
Buena Park, CA 90622

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear James B. Vanderpool,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

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December.

June 2, 2017

Tom Hatch
City Manager
City of Costa Mesa
77 Fair Dr., P.O. Box 1200
Costa Mesa, CA 92626

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Tom Hatch,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Amanda Carr
Deputy Director - OC Public Works/OC
Orange County Public Works, Glassell Field Office
2301 North Glassell Street
Orange, CA 92865

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Amanda Carr,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

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[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Peter Grant
City Manager
City of Cypress
5275 Orange Avenue
Cypress, CA 90630

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Peter Grant,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

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To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

John Sibley
Interim City Manager
City of Fountain Valley
10200 Slater Avenue
Fountain Valley, CA 92708

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear John Sibley,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Allan L. Roeder
Interim City Manager
City of Fullerton
303 W. Commonwealth Avenue
Fullerton, CA 92832

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Allan L. Roeder,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public_notices/petitions/water_quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Scott C. Stiles
City Manager
City of Garden Grove
11222 Acacia Parkway
Garden Grove, CA 92840

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Scott C. Stiles,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Fred Wilson
City Manager
City of Huntington Beach
2000 Main Street
Huntington Beach, CA 92648

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Fred Wilson,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Sean Joyce
City Manager
City of Irvine
One Civic Center Plaza
Irvine, CA 92606-5207

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Sean Joyce,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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

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Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

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2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Jim Sadro
City Manager
City of La Habra
110 E. La Habra Blvd.
La Habra, CA 90631

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Jim Sadro,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public_notices/petitions/water_quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

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a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

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(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Laurie Murray
City Manager
City of La Palma
7822 Walker Street
La Palma, CA 90623

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Laurie Murray,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Bruce E. Channing
City Manager
City of Laguna Hills
24035 El Toro Road
Laguna Hills, CA 92653

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Bruce E. Channing,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Chris Macon
City Manager
City of Laguna Woods
24264 El Toro Road
Laguna Woods, CA 92637

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Chris Macon,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

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Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Debra Rose
City Manager
City of Lake Forest
25550 Commercentre Drive, Suite 100
Lake Forest, CA 92630

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Debra Rose,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Bret Plumlee
City Manager
City of Los Alamitos
3191 Katella Avenue
Los Alamitos, CA 90720

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Bret Plumlee,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
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Citations

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Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Dave Kiff
City Manager
City of Newport Beach
100 Civic Center Drive, second floor of Bay E
Newport Beach, CA 92660

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Dave Kiff,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Rick Otto
City Manager
City of Orange
300 E. Chapman Ave.
Orange, CA 92866

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Rick Otto,

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public_notices/petitions/water_quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Damian Arrula
City Administrator
City of Placentia
401 E. Chapman Ave.
Placentia, CA 92870

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Damian Arrula,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public_notices/petitions/water_quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Cynthia Kurtz
City Manager
City of Santa Ana
20 Civic Center Plaza, 8th Floor
Santa Ana, CA 92701

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Cynthia Kurtz,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Jill Ingram
City Manager
City of Seal Beach
211 Eighth Street
Seal Beach, CA 90740

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Jill Ingram,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

James Box
City Manager
City of Stanton
7800 Katella Avenue
Stanton, Ca 90680-3162

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear James Box,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Jeffrey Parker
City Manager
City of Tustin
300 Centennial Way
Tustin, CA 92780

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Jeffrey Parker,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Steve Franks
City Manager
City of Villa Park
17855 Santiago Boulevard
Villa Park, CA 92861

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Steve Franks,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Eddie Manfro
City Manager
City of Westminster
8200 Westminster Blvd.
Westminster, CA 92683

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Eddie Manfro,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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

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Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

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2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

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This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Mark Pulone
City Manager
City of Yorba Linda
4845 Casa Loma
Yorba Linda CA, 92886

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSYTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mark Pulone,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Orange County's Phase I MS4s are regulated through the Orange County MS4 Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Orange County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4]

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Orange County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Orange County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?
c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?
d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.
e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

3. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

4. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Barbara Barry at (951) 248-0375 or barbara.barry@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

California Regional Water Quality Control Board
Santa Ana Region

July 13, 1990

ITEM: 11

SUBJECT: Waste Discharge Requirements for the Riverside County Flood Control & Water Conservation District, the County of Riverside, and the Incorporated Cities of Riverside County Within the Santa Ana Region, Stormwater Runoff Management Program, Riverside County, Order No. 90-104 (NPDES No. CA 8000192)

DISCUSSION:

See attached Fact Sheet.

RECOMMENDATION:

Adopt Order No. 90-104, NPDES No. CA 8000192, as presented.

In addition to the dischargers, comments were solicited from the following agencies and/or persons:

U. S. Environmental Protection Agency - Robert Wills, Pretreatment, Sludge, and Stormwater Section
U.S. Army District, Los Angeles, Corps of Engineers - Permits Section
NOAA, National Marine Fisheries Service
U.S. Fish and Wildlife Service
State Water Resources Control Board - Ted Cobb, Office of the Chief Counsel
State Water Resources Control Board - Archie Matthews, Division of Water Quality
State Department of Water Resources - Los Angeles
California Regional Water Quality Control Board, San Francisco Bay Region (2) - Tom Mumley
California Regional Water Quality Control Board, Los Angeles Region (4) - David Gildersleeve
California Regional Water Quality Control Board, Central Valley Region (5) - Wayne Pierson
California Regional Water Quality Control Board, Colorado River Basin Region (7)
California Regional Water Quality Control Board, San Diego Region (9) - Bruce Posthumus
State Department of Fish and Game - Marine Resources Region
State Department of Health Services - Santa Ana
State Department of Health Services - San Diego
State Department of Health Services - San Bernardino
State Department of Parks and Recreation - Henry R. Agonia
Orange County Health Care Agency - Robert Merryman

Orange County Environmental Management Agency, Environmental Resources Division - Bob Collacott
San Bernardino County Department of Health Services - Paul Ryan
San Bernardino County Flood Control District - Chuck Laird
Riverside County Health Department - John Fanning
South Coast Air Quality Management District, El Monte - James Lents
Caltrans, District 8 - San Bernardino
Southern Pacific Railroad
Atchison, Topeka & Santa Fe Railway Company
U. S. Army Corps of Engineers
Department of the Air Force, March Air Force Base
National Forest Service
Brown & Caldwell - Jack Baylis
Uribe And Associates - Geoff Brosseau
Bill Dendy & Associates - Bill Dendy
Building Industry Association - Governmental Affairs Council
L.A. County Department of Public Works - John Mitchell
AMI Circle City Hospital
Corona Community Hospital
Riverside Community Hospital
Riverside General Hospital
Chapman College
Mt. San Jacinto College
University of California, Riverside
Riverside Community College
School Districts
Alvord Unified School District
Corona-Norco Unified School District
Hemet Unified School District
Lake Elsinore Unified School District
Menifee Union School District
Moreno Valley Unified School District
Nuview Union School District
Perris Elementary School District
Perris Union High School District
Riverside Unified School District
Romoland School District
San Jacinto Unified School District
Val Verde School District
Environmental Organizations
Sierra Club, Orange County Chapter
Sierra Club, Los Angeles Chapter - Dick Hingson
Natural Resources Defense Council (NRDC)
Tri-County Conservation League - Gertrude Hagum
Press Enterprise

Santa Ana Watershed Project Authority - Neil Cline
Orange County Water District - Bill Mills
Metropolitan Water District - Ed Means
Western Municipal Water District - Don Harriger
Eastern Municipal Water District - Bill Plummer
San Bernardino Valley Municipal Water District - Louis Fletcher
Elsinore Valley Municipal Water District - James Laughlin
Lee Lake Water District - F. E. Wood
City of Ontario - City Manager/Director of Public Works
City of San Bernardino - City Manager/Director of Public Works
City of Fontana - City Manager/Director of Public Works
City of Rancho Cucamonga - City Manager/Director of Public Works

California Regional Water Quality Control Board
Santa Ana Region
6809 Indiana Avenue, Suite 200
Riverside, CA 92506-4298

FACT SHEET

PROJECT

The attached pages contain information concerning an application for waste discharge requirements and a National Pollutant Discharge Elimination System (NPDES) permit. Order No. 90-104, NPDES No. CA 8000192, prescribes waste discharge requirements for urban stormwater runoff from the cities and the unincorporated areas in Riverside County within the jurisdiction of the Santa Ana Regional Board. On May 8, 1990, the Riverside County Flood Control & Water Conservation District (RCFC&WCD) and the County of Riverside, in cooperation with the cities of Beaumont, Corona, Hemet, Lake Elsinore, Moreno Valley, Norco, Perris, Riverside, and San Jacinto (hereinafter collectively referred to as the dischargers), submitted NPDES Application No. CA 8000180 for an areawide stormwater discharge permit under the National Pollutant Discharge Elimination System (NPDES). As part of the permit application, a topographic map, storm drain system maps, listings of cities and entities participating in this program, and copies of ordinances relevant to the urban stormwater runoff from the Cities of Riverside and Moreno Valley were submitted. Copies of ordinances from the remaining seven cities participating in this program will be submitted at a later date.

PROJECT AREA

The permitted area is delineated by the San Bernardino-Riverside County boundary line on the north and northwest, the Orange Riverside County boundary line on the west, the Santa Ana-San Diego Regional Board boundary line on the south, and the Santa Ana Colorado River Basin Regional Board boundary line on the east (see Attachment "A").

CLEAN WATER ACT REOUIREMENTS

The Federal Clean Water Act (CWA) allows the U. S. Environmental Protection Agency (EPA) to delegate its NPDES permitting authority to states with an approved environmental regulatory program. The State of California is one of the delegated states. The Porter Cologne Act (California Water Code) authorizes the State Board, through its Regional Boards, to regulate and control the discharge of pollutants into waters of the state and tributaries thereto.

RBSA 28806
RB8 000644

CLEAN WATER ACT REQUIREMENTS - CONT'D

Section 405 of the Water Quality Act (WQA) of 1987 added Section 402(p) to the CWA. Pursuant to Section 402(p)(4) of the CWA, the EPA is required to promulgate regulations for stormwater permit applications for stormwater discharges associated with industrial activities and municipal separate storm drain systems serving a population of 100,000 or more. Section 402 (p)(4) of the CWA also requires dischargers of stormwater associated with industrial activities and municipal separate storm drain systems serving a population of 250,000 or more to file stormwater permit applications by February 4, 1990.

On December 7, 1988, EPA published its proposed regulations in the Federal Register to solicit public comments. Final regulations are tentatively scheduled to be promulgated on July 20, 1990 and to be published in the Federal Register on August 4, 1990. In the absence of final stormwater regulations, a permit governing municipal stormwater discharges should meet both the statutory requirements of Section 402 (p)(3)(B) and all requirements applicable to a NPDES permit issued under the issuing authority's discretionary authority in accordance with Section 402 (a)(1)(B) of the CWA.

AREAWIDE STORMWATER PERMIT

To regulate and control stormwater discharges from the Riverside County area to the Riverside County storm drain systems, an areawide approach is essential. The entire storm drain system is not controlled by a single entity; the RCFC&WCD, several cities, and the State Department of Transportation (Caltrans) manage the system. In addition to the cities and the RCFC&WCD, there are a number of other significant contributors of urban stormwater runoff to these storm drain systems. These include: large institutions such as the State University system, schools, hospitals etc.; federal facilities such as military sites etc.; state agencies such as Caltrans; water and wastewater management agencies such as Eastern & Western Municipal Water Districts; the National Forest Service; and state parks. The management and control of the entire flood control system cannot be effectively carried out without the cooperation and efforts of all these entities. Also, it would not be meaningful to issue a separate stormwater permit to each of the entities within the permitted area whose land/facilities drain into the county storm drain systems. The Regional Board and a majority of the cities and the county have concluded that the best management option for the Riverside County area is to issue an areawide stormwater permit.

AREAWIDE STORMWATER PERMIT - CONT'D

Some of the RCFC&WCD storm drain systems discharge into storm drain systems controlled by other entities, such as the Orange County Flood Control District, which is regulated under the Regional Board's Order No. 90-71, NPDES No. CA 8000180. Some of the storm drain systems discharge into drainage areas of Riverside County within the Colorado River Basin and San Diego Regional Boards' jurisdiction. Permit requirements for stormwater runoff from the drainage areas of Riverside County within the jurisdiction of the San Diego and Colorado River Basin Regional Boards will be addressed by these Regional Boards.

COORDINATION WITH OTHER REGIONAL AGENCIES

In developing best management practices and monitoring programs, consultation/coordination with other flood control districts and other regional boards is essential. Regional Board staff will coordinate the program with other regional boards and other flood control districts/cities on an "as needed" basis.

EXISTING FACILITIES AND PROGRAMS

Within the Santa Ana Region, the RCFC&WCD serves a population of approximately 0.8 million, occupying an area of approximately 1,300 square miles. The District's system includes an estimated 200 miles of opened and closed storm channels. The cities' systems include an estimated 57 miles of opened and closed storm channels. Approximately one-quarter (1/4) of Riverside County drains into water bodies within this Regional Board's jurisdiction. Stormwater discharges from urbanized areas consist mainly of surface runoff from residential, commercial, and industrial developments. In addition, there are stormwater discharges from agricultural land uses, including dairy operations. The constituents of concern and significance in these discharges are: total and fecal coliform, enterococcus, total suspended solids, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), oil and grease (O&G), heavy metals, nutrients, base/neutral and acid extractibles, pesticides, herbicides, and petroleum hydrocarbon components.

The RCFC&WCD has an active surface water quality monitoring program in the permit area. This monitoring program includes 12 water quality monitoring stations, 11 continuous stream gaging stations and 6 crest stage gaging stations, and 51 automatic precipitation gaging stations. Water quality sampling is performed quarterly in January, April, July, and October under dry weather conditions. Samples collected are analyzed for nutrients, metals, minerals, specific conductance, total filtrable residue, and pH. Most of the water quality monitoring stations are located at stormwater drain systems in the Santa Ana River area.

EXISTING FACILITIES AND PROGRAMS - CONT'D

To protect the beneficial uses of waters of the state, the pollutants from all sources need to be controlled. Recognizing this, and the fact that stormwater discharges contain significant amounts of pollutants, the RCFC&WCD, the County of Riverside, the incorporated cities of Riverside County, and the Regional Board have all agreed that an areawide stormwater permit is the most effective way to develop and implement a comprehensive stormwater management program in a timely manner. This areawide stormwater permit contains requirements with time schedules that will allow the County of Riverside and the cities to address water quality problems caused by urban stormwater runoff by developing and implementing management programs to reduce pollutants in stormwater discharges to the maximum extent practicable.

PERMIT REQUIREMENTS

In accordance with Section 402(p)(3), as part of a program to reduce the pollutants in stormwater discharges to the maximum extent practicable, the dischargers are required to submit existing management plans and programs being implemented in the localities, and information that could lead to successful identification of illegal discharges and sources of pollutants in stormwater discharges. In addition, the dischargers will be required to adopt and implement effective management programs and control measures in accordance with a time schedule approved by the Executive Officer of the Regional Board. Due to the large number of water bodies covered in this order, it is necessary to prioritize water bodies for the development and implementation of the stormwater management program. The stormwater management program will be developed and implemented in two phases, Phase I and Phase II. In Phase I, the dischargers will be required to submit existing stormwater qualitative data and to develop stormwater management and monitoring programs for those water bodies where beneficial uses are threatened or impaired due to runoff of stormwater and urban nuisance water. These water bodies include Reaches 3 and 4 of the Santa Ana River, Prado area streams, San Gabriel Mountain Streams (Valley Reaches), Lake Evans, Lee Lake, Lake Mathews, Lake Elsinore, and Canyon Lake. In Phase II, the dischargers will be required to submit existing stormwater qualitative data and to develop stormwater management and monitoring programs for the remaining water bodies which include the San Jacinto River and its tributaries, San Timoteo Creek and its tributaries, Lake Perris, Lake Fulmor, Lake Hemet, Lake Norconian, and Mockingbird Reservoir.

If existing management programs are not effective in controlling pollutant loading and in achieving the water quality objectives of the receiving waters, additional programs shall be developed and implemented.

PERMIT REQUIREMENTS - CONT'D

The permit also requires the development and implementation of management programs (best management practices) during the life of the permit such that the quality of stormwater discharged can be improved and the water quality objectives of the receiving waters can be met ultimately. It is also expected that the beneficial uses of the receiving waters will be protected through implementation of best management practices.

Currently, the RCFC&WCD has 12 monitoring stations throughout its system. The proposed order **requires the dischargers to submit a stormwater system monitoring program that will meet the objectives, as outlined in Item VII.1., of the program.**

BENEFICIAL USES

Stormwater flows which are discharged to storm drain systems in Riverside County are tributary to various water bodies (inland surface streams and lake and reservoirs) of the state. The beneficial uses of these water bodies include municipal and domestic supply, agricultural supply, industrial service supply, industrial process supply, groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, and preservation of rare and endangered species. The ultimate goal of this stormwater management program is to protect the beneficial uses of the receiving waters.

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 the stormwater 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 stormwater discharges and receiving waters will be improved, thereby protecting the beneficial uses of waters of the United States. This discharge is consistent with the federal and state antidegradation requirements and a complete antidegradation analysis is not necessary.

PUBLIC WORKSHOP

The Regional Board recognizes the significance of Riverside County's Stormwater/Urban Runoff Management Program and will conduct at least one workshop every year during the term of this permit to discuss the progress of the stormwater management program. The details of the annual workshop will be 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 permit may register their name, mailing address and phone number with the Regional Board office at the address given below.

PUBLIC HEARING

The Regional Board will hold a public hearing regarding the proposed waste discharge requirements. The public hearing is scheduled to be held on Friday, July 13, 1990, at 9:00 a.m. at the City Council Chambers in Riverside. Further information regarding the conduct and nature of the public hearing concerning these waste discharge requirements may be obtained by writing or visiting the Santa Ana Regional Board office, 6809 Indiana Avenue, Suite 200, Riverside.

WRITTEN COMMENTS

Interested persons are invited to submit written comments on the proposed waste discharge requirements and the Executive Officer's proposed determinations. Comments should be submitted by June 22, 1990, either in person or by mail to:

Joanne Lee
California Regional Water Quality Control Board
Santa Ana Region
6809 Indiana Avenue, Suite 200
Riverside, CA 92506-4298

INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Joanne Lee at (714)782-4130. 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 10:00 a.m. and 4:00 p.m., Monday through Thursday (excluding holidays).

REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group of applications may leave his name, 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.

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. 90-104

NPDES No. CA 8000192

Waste Discharge Requirements
for
the Riverside County Flood Control & Water Conservation District
and
the County of Riverside, and
the Incorporated Cities of Riverside County Within the Santa Ana Region
Areawide Urban Stormwater Runoff
Riverside County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. On May 8, 1990, the County of Riverside and the Riverside County Flood Control & Water Conservation District (RCFC&WCD), in cooperation with the cities of Beaumont, Corona, Hemet, Lake Elsinore, Moreno Valley, Norco, Perris, Riverside, and San Jacinto (hereinafter collectively referred to as the dischargers), submitted NPDES Application No. CA 8000192 for an areawide stormwater discharge permit under the National Pollutant Discharge Elimination System (NPDES).

2. The 1972 Clean Water Act (CWA) recognized the need to prohibit the discharge of pollutants to surface water bodies from point sources such as industrial facilities and municipal sewage treatment plants. The discharges of pollutants from point sources are regulated by the NPDES permit system, which required technology-based controls for treatment of wastewater. Stormwater point source discharges were exempt from the NPDES permitting requirements unless these discharges were contaminated by industrial/commercial activity. The Regional Board recognized the water quality problems associated with stormwater discharges from industrial facilities and has issued a number of stormwater permits for such facilities in accordance with the EPA regulations.

3. In 1976, the United States Environmental Protection Agency (EPA) issued new regulations establishing a comprehensive permitting program for all stormwater discharges except for rural runoff uncontaminated by industrial/commercial activity. Channelized stormwater runoff from rural areas continued to be defined as nonpoint source unless designated otherwise by the permitting authority.

RB8.000650 RBSA_28012

4. Since 1976, EPA has issued several revisions to the stormwater regulations. Section 405 of the Water Quality Act (WQA) of 1987 added Section 402(p) to the CWA. Pursuant to Section 402(p)(4) of the CWA, EPA is required to promulgate regulations for stormwater permit applications for stormwater discharges associated with industrial activities and municipal separate storm drain systems serving a population of 100,000 or more. Section 402 (p)(4) of the CWA also requires dischargers of stormwater associated with industrial activities and municipal separate storm drain systems serving a population of 250,000 or more to file stormwater permit applications by February 4, 1990.

5. On December 7, 1988, EPA published its proposed regulations in the Federal Register to solicit public comments. Final regulations are tentatively scheduled to be promulgated on July 20, 1990 and to be published in the Federal Register on August 4, 1990. In the absence of final stormwater regulations, a permit governing municipal stormwater discharges should meet both the statutory requirements of Section 402 (p)(3)(B) and all requirements applicable to a NPDES permit issued under the issuing authority's discretionary authority in accordance with Section 402 (a)(1)(B) of the CWA.

6. The beneficial uses of a number of water bodies within Riverside County are threatened or impaired wholly or in part due to urban stormwater runoff and nuisance water. These water bodies include the Santa Ana River (SAR), Reaches 3 and 4, Canyon Lake, Lake Elsinore, Lake Evans, and Lake Mathews. A comprehensive stormwater and urban runoff management and regulatory program is essential for the protection of the water resources of the Region. The RCFC&WCD, the County of Riverside, the cities in Riverside County, and the Regional Board have recognized this fact, and as a first step towards protecting water quality in the area, a comprehensive management program is being developed. This order outlines the existing programs and specifies additional requirements to achieve water quality objectives for the Riverside County drainage areas. The intent of this permit is to regulate pollutant discharges and improve water quality in the Region in a timely manner.

7. Within the Santa Ana Region, the RCFC&WCD, serves a population of approximately 0.8 million, occupying an area of approximately 1,300 square miles. The District's system includes an estimated 200 miles of opened and closed storm channels and the cities' systems include an estimated 57 miles of opened and closed storm channels. Approximately one-quarter (1/4) of the entire Riverside County area drains into water bodies within this Regional Board's jurisdiction. The project area is shown on Attachment "A" and the drainage areas are characterized as shown on Attachment "B". Approximately 5/8 of the Riverside County drainage areas is within the jurisdiction of the Colorado River Basin Regional Board and the remaining one-eighth (1/8) of the Riverside County drainage areas is within the jurisdiction of the San Diego Regional Board. Urbanization of the drainage areas within the Colorado River Basin and San Diego Regional Boards is minimal in comparison to that in the drainage areas under the Santa Ana Regional Board's jurisdiction. Permit requirements for stormwater runoff from the drainage areas of Riverside County within the jurisdiction of the San Diego and Colorado River Basin Regional Boards will be addressed by these Regional Boards.

8. The discharges consist of surface runoff generated from various land uses in all the hydrologic drainage areas which discharge into water bodies in Riverside County. 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 connections to the storm drain systems. The constituents of concern and significance in these discharges are: total and fecal coliform, enterococcus, total suspended solids, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), oil and grease, heavy metals, nutrients, base/neutral and acid extractibles, pesticides, herbicides, and petroleum hydrocarbon components.

9. There are several entities whose land/facilities drain into the Riverside County storm drain systems. The RCFC&WCD has control over approximately 85% percent of the storm drain systems within the Region and has agreed to be the major responsible party in implementing the provisions of this order. The remaining storm sewer systems are owned and operated by the cities within the county and by the State Department of Transportation (Caltrans). The County of Riverside, and the incorporated cities within the county have agreed to

9. (cont'd)

cooperate with the RCFC&WCD in controlling and improving the quality of urban runoff from their respective areas. The RCFC&WCD has been named as the "principal permittee" and the County of Riverside and the incorporated cities have been named as the "co-permittees". Attachment "C" lists the incorporated cities with their 1990 estimated populations. Of the nine cities listed, there are two cities with an estimated 1990 population over 100,000.

10. Due to the enormous variability in stormwater quality and the complexity of the urban runoff management program, this areawide stormwater permit is categorized as a major NPDES permit. This areawide stormwater permit requires all entities discharging stormwater/urban runoff into the storm drain systems or any surface water bodies to have appropriate controls for proper management of this runoff. The Regional Board has the discretion and authority to require non-cooperating entities to participate in this areawide permit or obtain individual stormwater discharge permits, pursuant to 40 CFR 122.26(a). The entities listed in Attachment "D" are considered as potential dischargers of stormwater to the Riverside County drainage areas. It is expected that these entities will also work cooperatively with the County of Riverside to manage urban runoff.

11. The RCFC&WCD, as the "principal permittee", will obtain the cooperation of all entities in implementing the provisions of this order. The dischargers have agreed upon the responsibilities as outlined in the draft June 6, 1990 Implementation Agreement. In general, the RCFC&WCD, as the "principal permittee", will be responsible for preparing operating budgets, preparing and monitoring the implementation programs, coordinating and submitting reports to the Regional Board, and conducting inspections on District's storm drain systems. The County of Riverside and the incorporated cities, as the "co-permittees", will develop site-specific compliance requirements, perform compliance monitoring and inspections, submit storm drain maps and compliance reports to the RCFC&WCD, exercise enforcement authority for achieving compliance, and review and implement stormwater management programs.

12. The RCFC&WCD obtains its authority to control pollutants in stormwater discharges, to prohibit illegal discharges and control spills, and to require compliance and carry out inspections of the storm drain systems in the County of Riverside from the Riverside County Flood Control and Water Conservation District Act and various county ordinances which address industrial wastes and waste discharges, and land use within the unincorporated areas of Riverside County and contract cities. The "co-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 stormwater/urban runoff discharges.

13. The RCFC&WCD has an active surface water quality monitoring program in the permit area. This monitoring program includes 12 water quality monitoring stations, 11 continuous stream gaging stations and 6 crest stage gaging stations, and 51 automatic precipitation gaging stations. Water quality sampling is performed quarterly in January, April, July, and October under dry weather conditions. Samples collected are analyzed for nutrients, metals, minerals, specific conductance, total filtrable residue, and pH. Most of the water quality monitoring stations are located at stormwater drain systems in the Santa Ana River area.

14. A Water Quality Control Plan was adopted by the Regional Board on May 13, 1983. The Plan contains water quality objectives and beneficial uses of waters in the Santa Ana Region. On July 14, 1989, the Regional Board adopted a Basin Plan amendment, incorporating revised beneficial use designations for the ground and surface waters of the Region.

15. The requirements contained in this order are necessary to implement the Water Quality Control Plan.

16. An attempt has been made to incorporate all of the essential elements of the proposed federal stormwater regulations in this permit.

17. Stormwater discharges to the storm drain systems in Riverside County within the Santa Ana Region are tributary to various water bodies of the state. The identified water bodies are as follows (Only a portion of some of the water bodies listed below is within the Santa Ana Regional Board's jurisdiction):

17. (cont'd)

Inland Surface Streams

A. Santa Ana River
Santa Ana River, Reaches 3 and 4

B. Prado Area Streams
Tequesquite Arroyo (Sycamore Creek)
Chino Creek
Temescal Creek, Reaches 1, 2, 3, 4, 5, and 6
Coldwater Canyon Creek
Bedford Canyon Creek
Other tributaries to these Creeks

C. San Gabriel Mountain Streams (Valley Reaches)
Day and East Etiwanda Creek
Cucamonga Creek

D. San Jacinto River Basin
San Jacinto River, Reaches 1, 2, 3, 4, 5, 6, and 7
Bautista Creek - Headwaters to Debris Dam
Strawberry Creek and San Jacinto River, North Fork
Fuller Mill Creek
Stone Creek
Salt Creek
Other tributaries: Indian, Hurkey, Poppet and Potrero Creeks, and other tributaries to these Creeks

E. San Timoteo Creek Area Streams
San Timoteo Creek, Reaches 3 and 4
Little San Gorgonio Creek
Yucaipa Creek
Other Tributaries to these Creeks - Valley Reaches
Other Tributaries to these Creeks - Mountain Reaches

Lake and Reservoirs

F. Lake Evans
G. Lee Lake
H. Lake Mathews
I. Mockingbird Reservoir
J. Lake Norconian
K. Canyon Lake
L. Lake Elsinore
M. Lake Fulmor
N. Lake Hemet
O. Lake Perris

17. (cont'd)

The beneficial uses of these water bodies include municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), industrial process supply (PROC), groundwater recharge (GWR), water contact recreation (REC-1), non-contact water recreation (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), wildlife habitat (WILD), and preservation of rare and endangered species (RARE). The beneficial uses of individual water bodies are shown on Attachment "E".

18. Stormwater discharged from the storm drain systems operated by the County of San Bernardino drain into various water bodies in the project area. These water bodies include the Santa Ana River and San Timoteo Creek. The County of San Bernardino will also be required to obtain an areawide stormwater permit for effective control of the pollutants in the stormwater runoff discharged from its storm drain systems.

19. Due to the large number of water bodies covered in this order, it is necessary to prioritize these water bodies for the development and implementation of the stormwater management program to effectively control the pollutants in the stormwater discharges. The stormwater management program will be developed and implemented in two phases, Phase I and Phase II. In Phase I, the dischargers will be required to submit existing stormwater qualitative data and develop management and monitoring programs for those water bodies where beneficial uses are threatened or impaired due to runoff of stormwater and urban nuisance water. These water bodies include Reaches 3 and 4 of the Santa Ana River, Prado area streams, Temescal Creek and its tributaries, Lake Evans, Lee Lake, Lake Mathews, Lake Elsinore, and Canyon Lake. In Phase II, the dischargers will be required to submit existing stormwater qualitative data and to develop stormwater management and monitoring programs for the remaining water bodies which include the San Jacinto River and its tributaries, San Timoteo Creek and its tributaries, Lake Perris, Lake Fulmor, Lake Hemet, Lake Norconian, and Mockingbird Reservoir.

20. Numeric and narrative water quality standards exist for the water bodies listed in Item No. 17, above. Currently, this permit does not contain numeric limitations for any constituents because the impact of stormwater discharges on the water quality of the above named receiving waters has not been fully determined. Extensive water quality monitoring and analysis of the data are essential to make that determination. This order requires the dischargers continue to monitor the stormwater discharges or begin monitoring as necessary, and to analyze the data. Additionally, the order also requires development and implementation of best management practices[1] (BMPs) in accordance with the WQA of 1987. It is anticipated that with the implementation of BMPs by the dischargers, the pollutants in the stormwater runoff will be reduced and the quality of the receiving waters will be improved. The ultimate goal of the urban stormwater runoff management program is to attain water quality consistent with the water quality objectives for the receiving waters to protect the beneficial uses.

21. With respect to industrial activities, the Regional Board currently regulates discharges of point source process wastewater and non-process wastewater and stormwater discharges to storm drain systems through NPDES permits. Point source discharges other than stormwater will continue to be regulated by the Regional Board. Industrial stormwater dischargers are required to cooperate with the RCFC&WCD to control the discharge of pollutants in the stormwater runoff from individual facilities or to obtain individual industrial stormwater discharge permits from the Regional Board.

22. Recognizing the need for public involvement and participation in the development and implementation of an effective stormwater/urban runoff management program, the Regional Board will conduct at least one workshop each year during the term of this permit. The purposes of the workshops will be to solicit comments and to inform the public of the progress of the program. Written comments submitted will be forwarded to the State Board, EPA, and the RCFC&WCD for their review and comments.

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[1] Best Management Practices (BMPs) are water quality management practices that are maximized in efficiency for the control of stormwater runoff pollution.

23. 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.

24. The Regional Board has considered an antidegradation analysis, pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, for this discharge. The Regional Board finds that the stormwater discharges are consistent with the federal and state antidegradation requirements and a complete antidegradation analysis is not necessary.

25. The Regional Board has notified the dischargers and interested agencies and persons 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.

26. 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 dischargers, 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 to manage the program overall, including:

1. Administer the Riverside County Flood Control and Water Conservation District Act.

2. Conduct water quality and hydrographic monitoring of the storm drain system outfalls as agreed upon by the Executive Officer.

3. Develop uniform criteria for storm drain system inspections.

4. Conduct inspections of the storm drain systems within its jurisdiction.

5. Implement management programs, monitoring programs, and implementation plans within its jurisdiction as required by this order.

I. RESPONSIBILITIES OF PRINCIPAL PERMITTEE - CONT'D

6. Prepare and submit to the Regional Board all the reports, plans, and programs as required in this order.

7. Monitor the implementation of the plans and programs and determine their effectiveness in attaining water quality objectives.

8. Coordinate all the activities with the Regional Board.

9. Enact legislation and ordinances as necessary to establish legal authority.

10. Obtain public input[2] for any proposed management and implementation plans.

11. Pursue enforcement actions as necessary to ensure compliance with stormwater management programs and implementation plans.

12. Respond to emergency situations such as accidental spills, leaks, illegal discharges/illicit connections etc. to prevent or reduce the discharge of pollutants to storm drain systems and waters of the United States.

II. RESPONSIBILITIES OF THE CO-PERMITTEES

The co-permittees shall be responsible to manage the program within its jurisdiction, including:

1. Administer the county and city ordinances.

2. Conduct storm drain system inspections in accordance with the uniform criteria developed by the principal permittee.

3. Conduct and coordinate with the principal permittee any surveys and characterizations needed to identify the pollutant sources and drainage areas.

4. Review and approve management programs, monitoring programs, and implementation plans.

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[2] Public input is demonstrated by: (1) disseminating the notice of availability of plans for review and comment to the public at large, environmental groups, federal, state and local agencies and other interested parties; and, (2) addressing concerns expressed by the public.

II. RESPONSIBILITIES OF THE CO-PERMITTEES - CONT'D

5. Implement management programs, monitoring programs, and implementation plans within each respective jurisdiction as required by this order.

6. Submit storm drain system maps with periodic revisions as necessary.

7. Prepare and submit all reports to the principal permittee in a timely manner.

8. Enact legislation and ordinances as necessary to establish legal authority.

9. Pursue enforcement actions as necessary to ensure compliance with the stormwater management programs and the implementation plans.

10. Respond to emergency situations such as accidental spills, leaks, illegal discharges/illicit connections, etc. to prevent or reduce the discharge of pollutants to storm drain systems and waters of the United States.

III. GENERAL REQUIREMENTS

1. The dischargers shall prohibit illegal discharges from entering into the municipal storm drain systems. Discharges conditionally allowed to enter storm drain systems are specified in Item V.6.

2. The dischargers shall develop and implement best management practices (BMPs) to control discharge of pollutants to the maximum extent practicable[3] to waters of the United States. The BMPs so developed, along with a time schedule for implementation, shall be submitted for the approval of and/or modification by the Executive Officer of the Regional Board. In developing the best management practices, the dischargers shall consider the water quality objectives of all the receiving water bodies.

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[3] Maximum Extent Practicable (MEP) means to the maximum extent possible, taking into account equitable considerations of synergistic, additive, and competing factors, including but not limited to, gravity of the problem, fiscal feasibility, public health risks, societal concern, and social benefits.

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA

1. Runoff Quality/Quantity

The dischargers shall collectively submit all quantitative information, generated since 1980 or earlier where better information exists, on stormwater discharges to the storm drain systems. This information will be used to facilitate the identification of sources of pollutants present in the stormwater discharges and to develop an effective discharge monitoring program for this order. Information to be submitted shall include the following:

a. Any historical averages and extremes data for stormwater discharges;

b. Analytical and flow data for stormwater samples collected from the storm drain system outfalls, and within any waters of the United States;

c. Precipitation data from the precipitation stations and the duration of the storm events (if available);

d. Discharge data from the storm drain systems as determined from the gaging stations;

e. Analysis of the data and the major pollutants identified in the stormwater discharges from each drainage area to each receiving water body and a determination whether the identified pollutants came from non-point source or point-source discharges.

2. System/Drainage Area Characterization

The dischargers shall submit information to the Regional Board for identification and characterization of the sources of pollutants in the stormwater discharges. The following information shall be provided:

a. An identification of all land use activities in each drainage area and a map showing various land use activities and storm drain systems in each drainage area.

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA - CONT'D

b. An identification of the drainage areas, more than 50 acres in size, that discharge stormwater to the storm drain systems and of those drainage areas that discharge to storm drain systems with pipe diameters greater than 36 inches.

c. The sizes of these drainage areas (acreage) and the sizes (pipe diameters or approximate dimensions of the storm drain systems) and physical characteristics of the storm drain systems. These physical characteristics shall include, but not be limited to, whether the storm drain system is lined or unlined and whether it has intermittent or continuous flow;

d. The names, locations, and Standard Industrial Codes (SIC) of specific industrial sources and principal land use activities in each drainage area, identified in IV.2.a., above, discharging to the storm drain systems. An estimate of the runoff coefficients for these drainage areas shall also be provided;

e. The locations of present storm drain outfalls discharging to waters of the United States. The name of each receiving water body shall be reported and the location of each outfall shall be indicated on a map;

f. The locations of major structural controls for stormwater discharge (e.g. retention basins, detention basins, etc).

3. Illegal Discharges/Illicit Connections

a. The dischargers shall provide a list of dischargers (permitted and unpermitted) known to exist currently who discharge process or non-process wastewater to the storm drain systems. The dischargers shall also provide any existing procedures used for detecting illegal discharges/illicit connections to the storm drain systems, the rationale for the procedures, and the drainage areas (or cities) in which these programs are practiced; and

b. A description of the present and historic use of ordinances or other controls to prohibit the illegal discharges/illicit connections to storm drain systems;

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA - CONT'D

4. Stormwater Management Program

A description of the existing stormwater/urban runoff management programs and structural and non-structural BMPs implemented by the dischargers.

5. Stormwater/Urban Runoff Monitoring Program

A description of the existing monitoring programs and the rationale for their selection.

6. Pollutant Information

The dischargers shall provide information regarding the discharge of any pollutant required under 40 CFR 122.21(g)(7)(iii) and (iv).

7. Other Pertinent Existing Information

The dischargers shall provide to the Regional Board any other existing information that is pertinent to this permit. For example, a description of drainage areas hydrologic parameters.

8. The dischargers shall submit the above information, IV.1. - IV.7., for various water bodies within the project area in accordance with the following schedule:

Phase	Description of Water Body	Compliance Report Due
I	Santa Ana River, Reaches 3 & 4, Prado area streams, San Gabriel Mountain Streams (Valley Reaches), Lake Evans, Lee Lake, Lake Mathews, Lake Elsinore, and Canyon Lake.	03/31/91
II	San Jacinto River and its tributaries, San Timoteo Creek and its tributaries, Lake Fulmor, and Lake Hemet, Lake Perris, Lake Norconian, and Mockingbird Reservoir.	03/31/92

V. RECONNAISSANCE SURVEY

1. The dischargers shall submit information from a reconnaissance survey to be conducted at the storm drain systems. The purpose of the survey is to identify illegal discharges/illicit connections to the storm drain systems. The reconnaissance survey field manual and implementation plan for prosecuting violators and eliminating illegal discharges so developed, along with time schedules for implementation, shall be submitted for the approval of and/or modification by the Executive Officer of the Regional Board.

2. By September 30, 1991, a proposed reconnaissance survey field manual, including a time schedule, for Phase I shall be submitted for approval and/or modification by the Executive Officer of the Regional Board. By September 30, 1992, a proposed reconnaissance survey field manual, including a time schedule, for Phase II shall be submitted.

3. The discharger shall implement the reconnaissance survey field manual after consideration of public comments and approval/modification of the manual by the Executive Officer of the Regional Board. By September 30, 1992 and every year thereafter until the completion of the survey, a progress report containing the following information shall be submitted:

   a. Results of the reconnaissance survey, including an analysis of the results.

   b. Additional information that would lead to isolating and identifying sources of illegal discharges/illicit connections to the storm drain systems. Such information should include, but is not limited to, visual observations (e.g. color, turbidity, odor, etc), major land use activities in the surrounding drainage areas, seasonal change of flow, the surrounding hydrogeologic formation, etc.

   c. A listing of any identified or suspected illegal dischargers including the names, locations, and types of the facilities and the names of the storm drain systems and receiving waters the illegal discharges are discharged to.

V. RECONNAISSANCE SURVEY - CONT'D

d. A listing of large industrial facilities (with more than 100 employees) where hazardous/toxic substances are stored and/or used, landfills, hazardous waste disposal, treatment, and/or recovery facilities, and any known spills, leaks or other problems in the area.

e. A discussion on all activities, related to the survey, conducted for the past 12 months.

4. By **September 30, 1992**, the dischargers shall submit a proposed implementation plan, including a tentative time schedule, for **Phase** I to prosecute violators and eliminate such discharges to the storm drain systems. **By September 30, 1993, a proposed implementation plan to prosecute violators and eliminate illegal discharges/illicit connections shall also be submitted for Phase** II. The proposed plan shall also include a description of the legal authorities for prosecuting violators and eliminate or control illicit disposal practices and illegal discharges to the storm drain systems, and a proposed time schedule for obtaining such legal authorities, if necessary.

5. The dischargers shall implement the program for prosecuting violators and eliminate illegal discharges to the storm drain systems after consideration of public comments and approval/modification of the program by the Executive Officer of the Regional Board. By **September 30, 1993** and every year thereafter, the discharger shall submit a progress report evaluating the effectiveness of the plan in detecting and eliminating illegal discharges to the storm drain systems.

6. The permittees shall effectively eliminate all identified illegal discharges/illicit connections in the shortest time practicable, and in no case later than July 1, 1995. Those illegal discharges/illicit connections identified after July 1, 1995 shall be eliminated in the shortest time practicable. The following discharges shall not be considered illegal discharges provided the discharges do not cause or contribute to violations of water quality standards and are not significant contributors of pollutants to waters of the United States: discharges composed entirely of stormwater, discharges covered under NPDES permits or waivers/clearances, discharges to storm drain systems form potable water line flushing, fire fighting, landscape irrigation, diverted stream flows, rising groundwaters (not including active dewatering systems), groundwater infiltration as defined at 40 CFR

V. RECONNAISSANCE SURVEY - CONT'D

6. (cont'd)

35.2005(20), discharges from potable water sources, passive foundation drains (not including active groundwater dewatering), air conditioning condensation, irrigation water, water from crawl space pumps, passive footing drains (not including active groundwater dewatering systems), lawn watering, individual residential vehicle washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash waters related to cleaning and maintenance by permittees, or waters not otherwise containing wastes as defined in California Water Code Section 13050 (d). If it is determined that any of the preceding discharges cause or contribute to violations of water quality standards or are significant contributors of pollutants to waters of the United States, the permittees shall prohibit these discharges from entering storm drain systems.

VI. DRAINAGE AREA MANAGEMENT PROGRAM

1. The dischargers shall develop and implement best management practices (BMPs) to control the discharge of pollutants to waters of the United States. The discharger shall submit information pertaining to the proposed stormwater system management programs for approval of and/or modification by the Executive Officer of the Regional Board. The information shall include, but need not be limited to, the following:

a. A brief description of the existing BMPs and stormwater management programs.

b. Proposed modifications to the existing BMPs and stormwater/urban runoff management programs to reduce pollutants in the stormwater discharges from industrial, commercial, and residential areas to the maximum extent practicable. At a minimum, the following shall be considered in developing the BMPs:

Structural Controls

i. For the permitted area, wherever appropriate, structural controls such as first flush diversion, detention/retention basins, infiltration trenches/basins, porous pavement, oil/grease separators, grass swales, wire concentrators, etc.

VI. DRAINAGE AREA MANAGEMENT PROGRAM - CONT'D

Non-Structural Controls

ii. Programs to educate the public on proper disposal of hazardous/toxic wastes. These may include public workshops, meetings, notifications by mail, collection programs for household hazardous wastes, etc.

iii. Management practices such as street sweeping, proper maintenance of streambanks, erosion control structures, etc.

iv. Regulatory approaches such as county and local ordinances, permitting of construction sites, etc.

v. Enforcement programs, established by the county and cities, including response to emergency incidents, field inspections, and identification and elimination of illegal discharges/illicit connections to the storm drain systems.

c. An implementation plan for site-specific BMPs which are required to reduce pollutants in the stormwater discharges from residential, commercial and industrial areas, and construction sites. Requirements for the implementation of BMPs at these sites are described below:

i. New Construction Sites

Runoff from construction sites has the potential to adversely impact the quality of waters of the United States. A full range of structural and non-structural BMPs shall be required at new construction sites. All industrial/commercial construction operations that result in a disturbance of one acre or more of total land area (or a smaller parcel of land which is a part of a larger common development) and residential construction sites that result in a disturbance of five acres or more of total land area (or a smaller parcel of land which is a part of a larger common development) shall be required to develop and implement BMPs, including a long term funding mechanism and commitment to support required maintenance of the BMPs, to control erosion/siltation and contaminated runoff from the construction sites.

VI. DRAINAGE AREA MANAGEMENT PROGRAM - CONT'D

ii. Residential and Commercial/Industrial Sites

Numerous studies have shown that runoff from residential and commercial/industrial areas has contributed a number of pollutants to waters of the United States. As development progresses, the percentage of paved surface increases, the rate of runoff increases, and the amount of pollutants in the runoff also increases. To prevent the increase of pollutants in the stormwater discharges, all new developments and existing facilities with significant redevelopment, **irrespective** of **their** size, must develop individual comprehensive, long-term, post construction stormwater management plans, **incorporating structural and non-structural BMPs. These management plans shall include a long term funding mechanism and commitment to support required maintenance of the BMPs.**

d. A description of the legal authorities for implementing the programs, and a proposed time schedule for obtaining such legal authorities, if necessary.

e. A description of staff, equipment, and funds available to implement the programs.

2. The dischargers shall submit the BMPs so developed, along with a time schedule for implementation, for the approval of and modification by the Executive Officer of the Regional Board in accordance with the following schedule:

Phase	Description of Water Body	Compliance Report Due
I	Santa Ana River, Reaches 3 & 4, Prado area streams, San Gabriel Mountain Streams (Valley Reaches), Lake Evans, Lee Lake, Lake Mathews, Lake Elsinore, and Canyon Lake.	03/31/92
II	San Jacinto River and its tributaries, San Timoteo Creek and its tributaries, Lake Fulmor, and Lake Hemet, Lake Perris, Lake Norconian, and Mockingbird Reservoir.	03/31/93

VI. DRAINAGE AREA MANAGEMENT PROGRAM - CONT'D

3. The dischargers shall implement the BMPs and other stormwater management programs after consideration of public comments and approval/modification of the programs by the Executive Officer of the Regional Board. By October 31, 1992 and every year thereafter, the dischargers shall submit a progress report assessing the reduction of pollutants discharged to waters of the United States and evaluating the effectiveness of the BMPs developed for the stormwater discharges. The dischargers shall also include recommended BMP modifications, with a time schedule for implementation, needed to achieve compliance with any water quality objectives not attained.

VII. STORMWATER SYSTEM MONITORING PROGRAM

1. The discharger shall submit a stormwater system monitoring program for approval of and/or modification by the Executive Officer. The objectives of the stormwater system monitoring program are:

   a. To define the type, magnitude (concentration and mass load), and sources of pollutants in the stormwater system discharges within each permittee's respective jurisdiction so that appropriate pollution prevention and correction measures can be identified;

   b. To evaluate the effectiveness of pollution prevention and correction measures; and

   c. To evaluate the compliance with water quality objectives established for the stormwater system or its components.

2. At a minimum, the stormwater system monitoring program shall include the following:

   a. A brief description of the existing monitoring programs.

   b. For both storm and non-storm conditions, sampling of the stormwater system discharges at major and representative outfalls discharging to waters of the United States to determine the pollutant loading rates to each receiving water body listed in Attachment "E".

VII. STORMWATER SYSTEM MONITORING PROGRAM - CONT'D

c. For both storm and non-storm conditions, a description of the number of monitoring stations, the locations of these monitoring stations, and the rationale for their selection.

d. For both storm and non-storm conditions, a description of the physical, chemical, and biological parameters selected for analysis, the method of analysis, the type of sampling, and the sampling frequency proposed. The rationale for each of these selections shall be provided.

e. Monitoring of the stormwater system discharges to identify illicit connections shall be conducted.

f. Quality assurance and quality control plans for the stormwater system monitoring program shall be submitted.

g. A data base that consolidates all monitoring information shall be maintained.

h. A description of the staff, equipment, and funds available to implement the monitoring program shall be provided.

i. A description of the legal authorities for implementing the program, and a proposed time schedule for obtaining such legal authorities (if necessary) shall be provided.

3. The dischargers shall submit the stormwater monitoring program so developed, along with a time schedule, for various water bodies in the project area in accordance with the following schedule:

Phase	Description of Water Body	Compliance Report Due
I	Santa Ana River, Reaches 3 & 4, Prado area streams, San Gabriel Mountain Streams (Valley Reaches), Lake Evans, Lee Lake, Lake Mathews, Lake Elsinore, and Canyon Lake.	03/31/92
II	San Jacinto River and its tributaries, San Timoteo Creek and its tributaries, Lake Fulmor, and Lake Hemet, Lake Perris, Lake Norconian, and Mockingbird Reservoir.	03/31/93

VII. STORMWATER SYSTEM MONITORING PROGRAM - CONT'D

3. The dischargers shall implement the stormwater system monitoring program after consideration of public comments and approval/modification of the program by the Executive Officer of the Regional Board. By March 31, 1992 and every year thereafter, the dischargers shall submit a report on progress towards implementation of the approved monitoring program.

VIII. RECEIVING WATER MONITORING PROGRAM

1. The discharger shall develop a receiving water monitoring program to assess the effects of pollutants from the stormwater system discharges on receiving water bodies, and to evaluate compliance with water quality objectives of the receiving water bodies. All the water bodies listed in Attachment "E" shall be addressed. The receiving water monitoring program shall be coordinated with the stormwater system monitoring program required under Section VII such that the aforestated objectives of the receiving water monitoring program will be achieved.

2. At a minimum, the receiving water monitoring program shall include the following:

   a. A brief description of the existing monitoring programs.

   b. A description of the number of monitoring stations, the location of these monitoring stations, and the rationale for their selection.

   c. A description of the physical, chemical and biological selected for analysis, the type of sampling, and the sampling frequency proposed. The rationale for each of these selections shall be provided.

   d. Quality assurance and quality control plans for the receiving water monitoring program.

   e. Maintenance of a data base that consolidates all monitoring information. This data base shall be coordinated with the data base required for the stormwater system monitoring program (VII.2.g.).

VIII. RECEIVING WATER MONITORING PROGRAM - CONT'D

3. The dischargers shall submit the receiving water monitoring programs for various water bodies within the project area in accordance with the following schedule:

Phase	Description of Water Bodies	Compliance Report Due
I	Santa Ana River, Reaches 3 & 4, Prado area streams, San Gabriel Mountain Streams (Valley Reaches), Lake Evans, Lee Lake, Lake Mathews, Lake Elsinore, and Canyon Lake.	03/31/92
II	San Jacinto River and its tributaries, San Timoteo Creek and its tributaries, Lake Fulmor, and Lake Hemet, Lake Perris, Lake Norconian, and Mockingbird Reservoir.	03/31/93

4. The dischargers shall implement the receiving water monitoring program after consideration of public comments and approval/modification of the program by the Executive Officer of the Regional Board. By March 31, 1992 and every year thereafter, the discharger shall submit a report on progress towards implementation of the approved receiving water monitoring program.

IX. FISCAL ANALYSIS

1. By July 31 of each year, a fiscal analysis of the capital and operation and maintenance expenditures necessary to accomplish the activities of the proposed plans and programs shall be performed.

2. By August 31, 1991 and every year thereafter, a fiscal analysis of the capital and operation and maintenance expenditures shall be submitted for review by EPA and the Regional Board.

X. DATA ANALYSIS

1. For the stormwater system monitoring program, the results of the chemical analysis and quantitative data (such as flow, precipitation, and discharge data) shall be compiled for each drainage area, each storm event, and for different times during the same storm event. The mass loading rates for the pollutants of concern shall be calculated.

X. DATA ANALYSIS - CONT'D

2. An evaluation shall be performed for the calculated mass loading rates from the stormwater system monitoring program and the receiving water monitoring program. Any impact of the discharges from the stormwater systems on the receiving waters shall be discussed, starting with the most significantly impacted receiving water bodies. The evaluation shall be concluded with recommendations and the corrective actions proposed for any resulting discrepancies.

3. By January 31, 1993 and every year thereafter, the analysis of all the above data shall be submitted.

XI. PROGRAM ANALYSIS

1. In January of every year, the principal permittee shall conduct an analysis of the effectiveness of the overall stormwater management program. If the water quality objectives of the receiving waters are violated as a result of stormwater/urban runoff discharges, the principal permittee shall identify proposed programs which will result in the attainment of the water quality objectives, and a time schedule to implement the new programs.

2. By March 31, 1993 and every year thereafter, the analysis of the overall program and any proposed programs, to achieve compliance with water quality objectives of water bodies that have not been attained, shall be submitted.

XII. REPORTING

1. All reports shall be signed by the "principal permittee" or duly authorized representative of the dischargers and shall be submitted to EPA and the Regional Board under penalty of perjury.

2. A signed copy of the Implementation Agreement between the RCFC&WCD, the County of Riverside, and the cities shall be submitted by January 31, 1991. Any revisions to the Implementation Agreement shall be forwarded to the Executive Officer within 30 days of approval by all the dischargers.

XII. REPORTING - CONT'D

3. Other reports and information required to be submitted to the Regional Board under the requirements specified above shall be reported in accordance with the following schedule:

Phase I

TASK		COMPLIANCE REPORT DUE
a.	Existing reports and programs IV.1.-IV.7.	03/31/91
b.	Proposed Reconnaissance Survey Field Manual - V.2.	09/30/91
c.	Proposed Implementation Plan for Prosecuting Illegal Dischargers - V.4.	09/30/92
d.	Management Programs (BMPs) and Implementation Plan - VI.1.- VI.2.	03/31/92
e.	Stormwater Monitoring Program VII.1. - VII.3	03/31/92
f.	Receiving Water Monitoring Program VIII.1. - VIII.3.	03/31/92
g.	Progress Reports after Plan Implementation	
	i. Reconnaissance Survey Progress Report - V.3.	09/30 of every year[4]
	ii. Illegal Discharges - V.5.	09/30 of every year[5]
	iii. Management Programs - VI.3.	03/31 of every year[6]

[4] The first progress report is due by September 30, 1992.

[5] The first progress report is due by September 30, 1993.

[6] The first progress report is due by March 31, 1993.

XII. REPORTING - CONT'D

TASK		COMPLIANCE REPORT DUE
g.	Progress Reports after Plan Implementation	
	iv. Stormwater Monitoring Program VII.4.	03/31 of every year[7]
	v. Receiving Water Monitoring Program VIII.4.	03/31 of every year[8]
h.	Compliance - Illegal Discharges	See Item V.6.
i.	Fiscal Analysis	08/31 of every year[9]
j.	Data Analysis	01/31 of every year[10]
k.	Program Analysis	03/31 of every year[11]

Phase II

TASK		COMPLIANCE REPORT DUE
a.	Existing reports and programs IV.1. - IV.7.	03/31/92
b.	Proposed Reconnaissance Survey Field Manual - V.2.	09/30/92
c.	Proposed Implementation Plan for Prosecuting Illegal Dischargers - V.4.	09/30/93
d.	Management Programs (BMPs) and Implementation Plan - VI.1.- VI.2.	03/31/93

[7] The first progress report is due by March 31, 1993.

[8] The first progress report is due by March 31, 1993.

[9] The first annual fiscal analysis is due by August 31, 1991.

[10] The first data/program analysis is due by January 31, 1993.

[11] The first program analysis is due by March 31, 1993.

XII. REPORTING - CONT'D

Phase II - cont'd

TASK		COMPLIANCE REPORT DUE
e.	Stormwater Monitoring Program VII.1.- VII.3.	03/31/93
f.	Receiving Water Monitoring Program VIII.1. - VIII.3.	03/31/93
g.	Progress Reports after Plan Implementation	
	i. Reconnaissance Survey Progress Report - V.3.	09/30 of every year[12]
	ii. Illegal Discharges - V.5.	09/30 of every year[13]
	iii. Management Programs - VI.3.	03/31 of every year[14]
	iv. Stormwater System Monitoring Program VII.4.	03/31 of every year[15]
	v. Receiving Water Monitoring Program VIII.4.	03/31 of every year[16]
h.	Compliance - Illegal Discharges	See Item V.6.
i.	Fiscal Analysis	08/31 of every year[17]

[12] The first Progress report is due by September 30, 1993.

[13] The first progress report is due by September 30, 1994.

[14] The first progress report is due by March 31, 1994.

[15] The first progress report is due by March 31, 1994.

[16] The first progress report is due by March 31, 1994.

[17] The first annual fiscal analysis is due by August 31, 1991.

XII. REPORTING - CONT'D

Phase II - cont'd

TASK	COMPLIANCE REPORT DUE
j. Data Analysis	01/31 of every year[18]
k. Program Analysis	03/31 of every year[19]

XIII. EXPIRATION AND RENEWAL

1. This Order expires on July 1, 1995 and the discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Code of Regulations not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements. This report of waste discharge shall include, but is not limited to, the following:

   a. Summary of the results of the monitoring program.

   b. Summary of the BMPs implemented and evaluations of their effectiveness.

   c. Summary of procedures implemented to detect, identify, and eliminate illegal discharges and illicit disposal practices and an evaluation of their effectiveness.

   d. Summary of enforcement procedures and actions taken to require stormwater dischargers to comply with the approved stormwater management programs.

   e. Summary of measures implemented to control pollutants in surface runoff from construction sites and an evaluation of their effectiveness.

   f. Evaluation of the need for additional BMPs, source control, and/or structural control measures.

---

[18] The first data analysis is due by January 31, 1994.

[19] The first program analysis is due by March 31, 1994.

XIII. EXPIRATION AND RENEWAL - CONT'D

g. Proposed plan of stormwater/urban runoff quality management activities that will be undertaken during the term of the next permit.

h. Any significant changes to the storm drain systems, outfall locations, detention/retention basins, and structural/non-structural controls.

2. This order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Clean Water Act, or amendments thereto, and shall become effective 10 days after date of its adoption, provided that the Regional Administrator of the Environmental Protection Agency has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

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 July 13, 1990.

G J Thibeault

Gerard J. Thibeault
Executive Officer

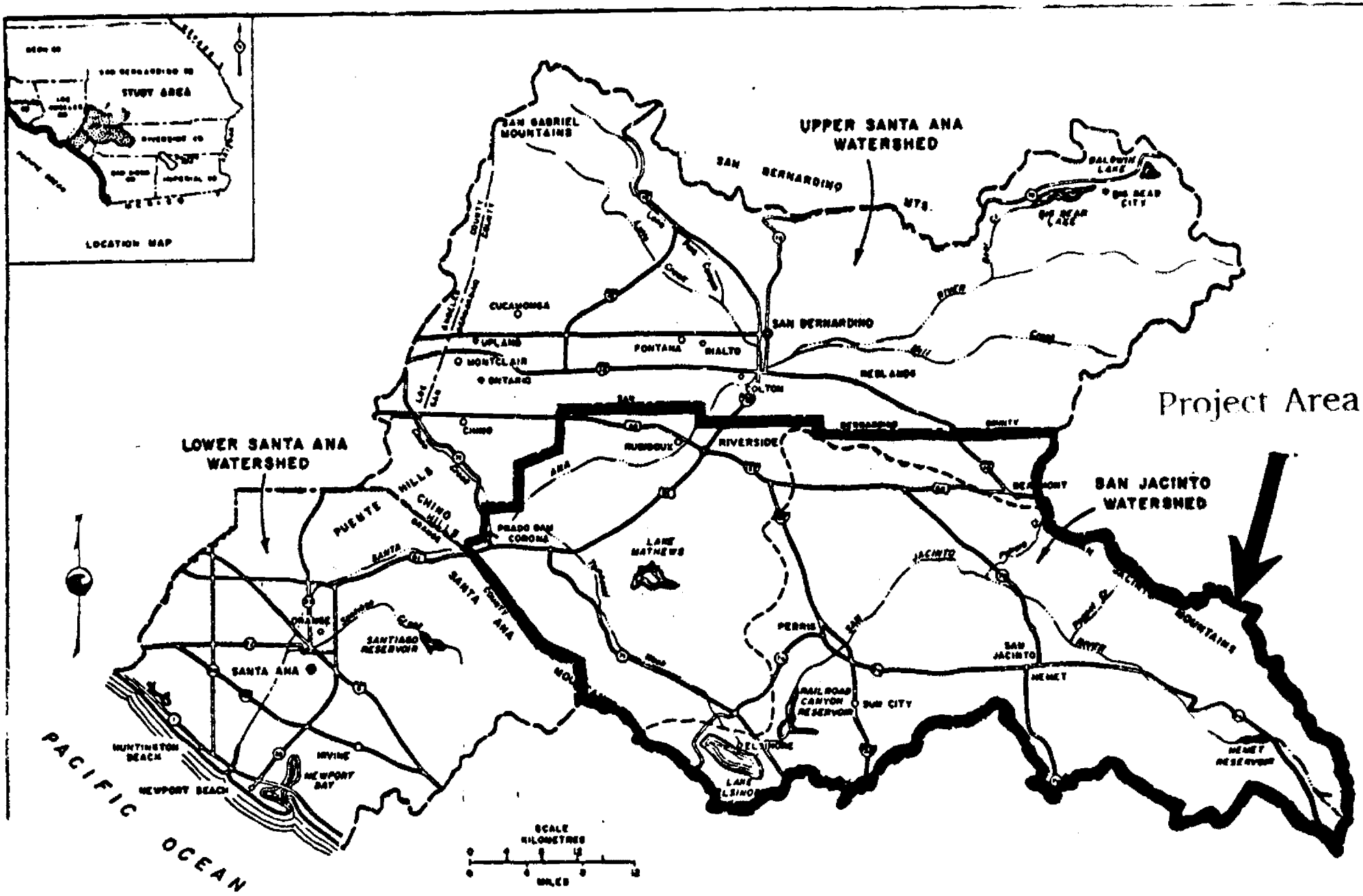
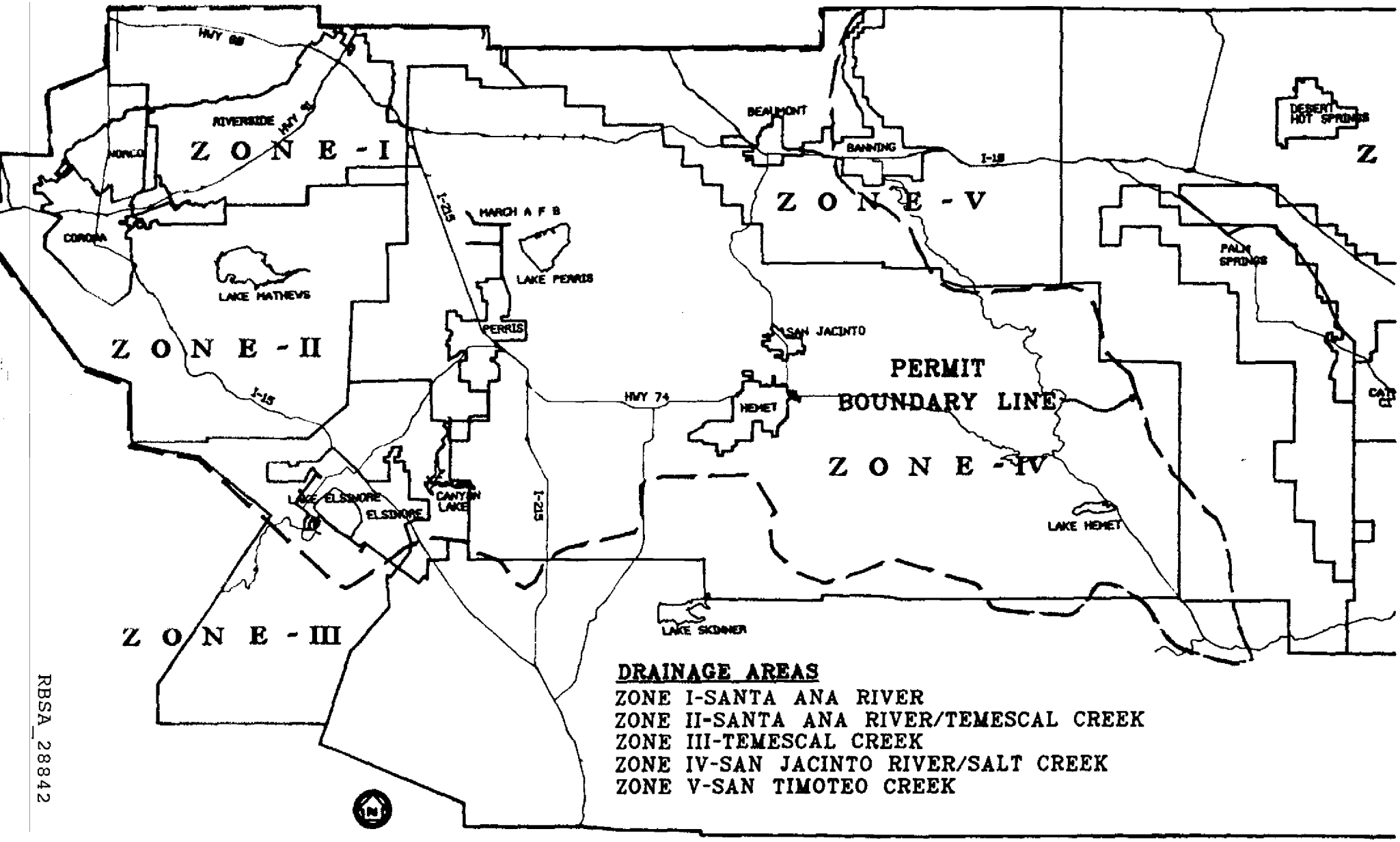


FIGURE I - SANTA ANA PLANNING AREA

Attachment "A"
Order No. 90-104 (NPDES No. CA 8000192)

RBSA_28841

RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT



RBSA_28842

Attachment "B"
Order No. 90-104 (NPDES No. CA 8000192)

POPULATION ESTIMATES FOR CITIES AND UNINCORPORATED AREAS
OF
RIVERSIDE COUNTY
WITHIN THE
SANTA ANA RIVER BASIN

CITY			1990 POPULATION
Beaumont			9,430
Corona			72,820
Hemet			34,460
Lake Elsinore			14,030
Moreno Valley			111,910
Norco			25,730
Perris			17,720
Riverside			214,350
San Jacinto			15,150
	SUB TOTAL	=	515,600
Unincorporated			271,460
	TOTAL	=	787,060

Attachment "C"
Order No. 90-104 (NPDES No. CA 8000192)

(REVISED 6/1/90)

LIST OF OTHER ENTITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS TO STORMWATER FACILITIES

Government Agencies
- California Department of Transportation (Caltrans)
- Department of the Air Force, March Air Force Base
- Special Districts
- State Parks
- U.S. Army Corps of Engineers

Hospitals
- AMI Circle City Hospital
- Corona Community Hospital
- Riverside Community Hospital
- Riverside General Hospital

Railroads
- AT&SF Railway Company
- Southern Pacific Railroad

School Districts
- Alvord Unified School District
- Corona-Norco Unified School District
- Hemet Unified School District
- Lake Elsinore Unified School District
- Menifee Union School District
- Moreno Valley Unified School District
- Nuview Union School District
- Perris Elementary School District
- Perris Union High School District
- Riverside Unified School District
- Romoland School District
- San Jacinto Unified School District
- Val Verde School District

Universities and Colleges
- Chapman College
- Mt. San Jacinto College
- Riverside Community College
- University of California Riverside

Water Districts
- Eastern Municipal Water District
- Elsinore Valley Municipal Water District
- Metropolitan Water District
- Western Municipal Water District

It is intended that this list will be added to during the permit process.

Attachment "D"
Order No. 90-104 (NPDES No. CA 8000192)

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
INLAND SURFACE STREAMS - Continued																		
UPPER SANTA ANA RIVER BASIN																		
Santa Ana River																		
Reach 3- Prado Dam to Mission Blvd. in Riverside	+	X			X			X	X		X			X				
Reach 4- Mission Blvd. in Riverside to San Jacinto Fault in San Bernardino	+			X	X			X	X		X			X				
Reach 5- San Jacinto Fault to Confluence with Bear Creek	X	X			I		X	X	X		I	X		X				
Reach 6- Confluence with Bear Creek to Headwaters (See also Individual Tributary Streams)	X	X			X			X	X			X		X		X		
San Bernardino Mountain Streams																		
Mill Creek Drainage:																		
Mill Creek:																		
Reach 1- Confluence with Santa Ana River to Bridge Crossing Route 38 at Upper Powerhouse	I	I			I			I	I			I		I				
Reach 2- Bridge Crossing Route 38 at Upper Powerhouse to Headwaters	X	X			X		X	X	X			X		X				
Mountain Home Creek	X				X		X	X	X			X		X				
Mountain Home Creek, East Fork	X				X		X	X	X			X		X		X		
Monkey Face Creek	X				X			X	X			X		X				
Alger Creek	X				X			X	X			X		X				
Falls Creek	X				X		X	X	X			X		X		X		
Vivian Creek	X				X			X	X			X		X				
High Creek	X				X			X	X			X		X				
Other Tributaries: Lost, Oak Cove, Green, Skinner, Momyer and Glen Martin Creeks, and other Tributaries to these Creeks	I				I			I	I			I		I				

+ Excepted from MUN by Reg. Bd. Res. 89-42

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

Attachment "E"
Order No. 90-104 (NPDES No. CA 8000192)

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
INLAND SURFACE STREAMS - Continued																		
UPPER SANTA ANA RIVER BASIN - Continued																		
San Gabriel Mountain Streams (Mountain Reaches)																		
San Antonio Creek	X	X	X	X	X		X	X	X			X		X				
Lytle Creek (South, Middle and North Forks) and Coldwater Canyon Creek	X	X	X	X	X		X	X	X			X		X				
Day and East Etiwanda Creeks	X			X	X			X	X			X		X				
Valley Reaches of Above Streams	I				I			I	I		I			I				
Cucamonga Creek (Mountain Reach)	X		X	X	X		X	X	X			X		X		X		
Cucamonga Creek (Valley Reach)	+				I			I	I		I			I				
Other Tributaries (Mountain Reaches): San Sevaine, Deer, Duncan Canyon, Henderson Canyon, Bull, Fan, Demens, Thorpe, Angalls, Telegraph Canyon, Stoddard Canyon, Icehouse Canyon, Cascade Canyon, Cedar, Falling Rock, Kerkhoff and Cherry Creeks, and other Tributaries to these Creeks	I				I			I	I			I		I				
San Timoteo Area Streams																		
San Timoteo Creek																		
Reach 1- Santa Ana River Confluence to Gauge at San Timoteo Canyon Road	+	X			X			X	X		X			X				
Reach 2- Gauge at San Timoteo Canyon Road to Confluence with Yucaipa Creek	+	X			X			X	X		X			X				
Reach 3- Confluence with Yucaipa Creek to Section 24, T2S, R3W (Bunker Hill II Boundary)	+				X			X	X		X			X				
Reach 4- Section 24, T2S, R3W (Bunker Hill II Boundary) to Confluence with Little San Gorgonio and Noble Creeks (Headwaters of San Timoteo Creek)	+				X			X	X		X			X				
Oak Glen, Potato Canyon and Birch Creeks	X				X			X	X		X			X				
Little San Gorgonio Creek	X				X			X	X			X		X				
Yucaipa Creek	I				I			I	I		I			I				
Other Tributaries to these Creeks- Valley Reaches	I				I			I	I		I			I				
Other Tributaries to these Creeks- Mountain Reaches	I				I			I	I			I		I				

+ Excepted from MUN by Reg. Bd. Res. 89-42 or 89-99

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
INLAND SURFACE STREAMS - Continued																		
UPPER SANTA ANA RIVER BASIN - Continued																		
Prado Area Streams																		
Tequesquite Arroyo (Sycamore Creek)	+				I			I	I		I			I				
Chino Creek	+				X			X	X		X			X				
Temescal Creek																		
Reach 1- Santa Ana River Confluence to Riverside Canal	+	X	X		X			X[3]	X		X			X				
Reach 2- Riverside Canal to Lee Lake	+	I	I		I			I	I		I			I				
Reach 3- Lee Lake (see Lakes, p. 2-13)																		
Reach 4- Lee Lake to Mid-section line of Sect. 17 (downstream end of freeway cut)	+	I			I			I	I		I			I				
Reach 5- Mid-section line of Sect. 17 (downstream end of freeway cut) to Elsinore Groundwater Subbasin Boundary	+	I			I			I	I		I			I				
Reach 6- Elsinore Groundwater Subbasin Boundary to Lake Elsinore Outlet	+				I			I	I		I			I				
Coldwater Canyon Creek	X	X			X			X	X		X			X				
Bedford Canyon Creek	+				I			I	I		I			I				
Other Tributaries to these Creeks	I				I			I	I		I			I				

+ Excepted from MUN by Reg. Bd. Res. 89-42
3 Access prohibited in some portions by Riverside County Flood Control

X= Present or Potential Beneficial Use
I= Intermittent of Potential Beneficial Use

Attachment "E"
Order No. 90-104 (NPDES No. CA 8000192)

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
INLAND SURFACE STREAMS - Continued																		
SAN JACINTO RIVER BASIN																		
San Jacinto River																		
Reach 1- Lake Elsinore to Canyon Lake	I	I			I			I	I		I			I				
Reach 2- Canyon Lake (see Lakes, p. 2-13)																		
Reach 3- Canyon Lake to Nuevo Road	+	I			I			I	I		I			I				
Reach 4- Nuevo Road to North-South Mid-Section Line, S8, T4S, R1W	+	I			I			I	I		I			I				
Reach 5- Mid-Section Line Section 8 to Confluence with Poppet Creek	+	I			I			I	I		I			I				
Reach 6- Poppet Creek to Cranston Bridge	I	I			I			I	I		I			I				
Reach 7- Cranston Bridge to Lake Hemet	X	X			X			X	X			X		X				
Bautista Creek- Headwaters to Debris Dam	X	X			X			X	X			X		X				
Strawberry Creek and San Jacinto River, North Fork	X	X			X			X	X			X		X				
Fuller Mill Creek	X	X			X			X	X			X		X				
Stone Creek	X	X			X			X	X			X		X				
Salt Creek	+							I	I		I			I				
Other Tributaries: Indian, Hurkey, Poppet and Potrero Creeks, and other Tributaries to these Creeks	I	I			I			I	I		I			I				

+ Excepted from MUN by Reg. Bd. Res. 89-42

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

Attachment "E"
Order No. 90-104 (NPDES No. CA 8000192)

TABLE 2-1
BENEFICIAL USES

Water Body	Beneficial Use																	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
LAKES AND RESERVOIRS																		
UPPER SANTA ANA RIVER BASIN																		
Baldwin Lake	+							I	I		I	I		I				
Big Bear Lake	X	X			X			X	X		X	X		X				
Evans Lake	+							X	X		X	X		X				
Jenks Lake	X	X			X			X	X			X		X				
Lee Lake	+	X	X		X			X	X		X			X				
Mathews, Lake	X	X	X	X	X			X[4]	X		X			X	X			
Mockingbird Reservoir	+	X						X[5]	X		X			X				
Norconian, Lake	+							X	X		X			X				
LOWER SANTA ANA RIVER BASIN																		
Anaheim lake	+				X			X	X		X			X				
Irvine lake (Santiago Reservoir)	X	X						X	X		X	X		X				
Laguna, Lambert, Peters Canyon, Rattlesnake, Sand Canyon and Siphon Reservoirs	+	X						X[6]	X		X			X				
SAN JACINTO RIVER BASIN																		
Canyon Lake (Railroad Canyon Reservoir)	X	X			X			X	X		X			X				
Elsinore, Lake	+							X	X		X			X				
Fulmor, Lake	X	X						X	X		X	X		X				
Hemet, Lake	X	X			X			X	X		X	X		X		X		
Perris, Lake	X	X	X	X	X			X	X		X	X		X				

\+ Excepted from MUN by Reg. Bd. Res. 89-42
4 Access prohibited by the Metropolitan Water District
5 Access prohibited by the Gage Canal Company (owner-operator)
6 Access prohibited by Irvine Ranch Company (owner)

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

Attachment "E"
Order No. 90-104 (NPDES No. CA 8000192)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NPDES NO. CAS 618033 AND WASTE DISCHARGE REQUIREMENTS ORDER NO. 96-30 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 AREAWIDE URBAN STORM WATER RUN-OFF

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. On January 3, 1995, the Riverside County Flood Control and Water Conservation District (RCFC&WCD), in cooperation with the County of Riverside, and the incorporated cities of Beaumont, Corona, Calimesa, Canyon Lake, Hemet, Lake Elsinore, Moreno Valley, Norco, Perris, Riverside, and San Jacinto (hereinafter collectively referred to as "permittees"), have jointly submitted a National Pollutant Discharge Elimination System (NPDES) Application No. CAS 618033 to renew their areawide NPDES permit for urban storm water run-off.

2. The 1987 amendments to the Clean Water Act required the United States Environmental Protection Agency (EPA) to develop permitting regulations for storm water discharges from municipal separate storm sewer systems serving a population of 100,000 or more and for storm water discharges associated with industrial activities, including construction sites. The EPA published proposed storm water regulations on December 7, 1988 and promulgated the final regulations on November 16, 1990. Prior to the EPA's promulgation of the final storm water 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 run-off.

3. On July 13, 1990, the Regional Board adopted Order No. 90-104 for urban storm water run-off from urban areas in Riverside County within the Santa Ana Region. Order No. 90-104 expired on July 1, 1995. The Riverside County Flood Control and Water Conservation District was named as the principal permittee and Riverside County and the incorporated cities were named as the co-permittees. In order to more effectively carry out the requirements of this order, the permittees have agreed that the RCFC&WCD will continue as principal permittee and Riverside County and the incorporated cities will continue as co-permittees. However, the Regional Board, in exercising its enforcement discretion, will take action only against the individual permittee responsible for specific violations of this order, whenever possible.

RBSA 37074
RB8 000688

4. Order No. 90-104 required the permittees to develop and implement a drainage area management plan (DAMP); develop and implement storm water and receiving water monitoring plans; to eliminate illegal and illicit discharges to the storm drain systems; and, to enact the necessary legal authority to effectively prohibit illegal and illicit discharges. The overall goal of these requirements was to reduce pollutant loadings to surface waters from urban run-off to the maximum extent practicable (MEP)[1]. This Order regulates urban storm water run-off[2] from areas under the jurisdiction of the permittees.

5. The Report of Waste Discharge (the permit renewal application) included the following major components:

   a. A map of the drainage area and maps of existing storm drain facilities
   b. A summary of the storm water management program
   c. A Consolidated Program for Water Quality Monitoring
   d. A copy of a Proposed Storm Water/Urban Run-off Management and Discharge Control Ordinance
   e. A copy of the current Implementation Agreement
   f. A copy of the Interagency Agreement
   g. The Drainage Area Management Plan (DAMP)
   h. A copy of Proposed Riverside County Grading and Erosion Control Ordinance

6. Within the Santa Ana Region, the permittees serve a population of approximately 930,000, occupying an area of approximately 1,360 square miles. The permitted area is shown on Appendix 1. This order regulates storm water run-off from areas under the jurisdiction of the permittees. The term storm water as used in this order includes storm water run-off, snow melt run-off, and surface run-off and drainage. The average annual rainfall in the urbanized area of Riverside County ranges from 10 to 12 inches. The permittees have jurisdiction over and/or maintenance responsibility for storm water conveyance systems within Riverside County. The storm drain system includes an estimated 200 miles of open and closed storm drains owned and operated by RCFC&WCD and an estimated 57 miles of open and closed storm drains owned and operated by the remaining permittees. The permittees have identified major outfalls(with a pipe diameter of 36 inches or greater or drainage areas draining 50 acres or more) and have submitted maps of existing storm drain facilities.

7. Approximately one quarter (1/4) of the entire Riverside County area drains into water bodies within the Santa Ana Region. Most of the urbanized areas of Riverside County lie within this Regional Board's jurisdiction. Storm water run-off from other portions of

---

[1] Maximum Extent Practicable (MEP) means to the maximum extent possible, taking into account equitable considerations of synergistic, additive and competing factors, including but not limited to the gravity of the problem, fiscal feasibility, public health risks, societal concerns and social benefits.

[2] Urban storm water run-off discharges include those discharges from residential, commercial, industrial and construction areas within the permitted area and excludes discharges from feedlots, dairies and farms

Riverside County is regulated by the San Diego and Colorado River Basin Regional Boards. The discharges consist of run-off from rainfall, snow melt, and surfacing ground water from various land use areas which either discharge directly to the Santa Ana River or to watercourses tributary to the Santa Ana River. Other major rivers in the area include the San Jacinto River and Temescal Creek. The San Jacinto Mountain areas drain into the San Jacinto River, which discharges into Lake Elsinore. Any overflow from Lake Elsinore is tributary to Temescal Creek, which flows into Reach 3 of the Santa Ana River in the Prado Flood Control Basin.

8. The Santa Ana River Basin is the major watershed within this Region. This watershed is divided into the upper and lower Santa Ana watersheds. The lower Santa Ana River Basin (downstream from Prado Dam) includes the Orange County drainage areas and the Upper Santa Ana River Basin includes the San Bernardino County and the Riverside County drainage areas. The San Bernardino County drainage areas are generally upstream of the Riverside County drainage areas.

9. The three county areas within this Region are regulated under three areawide permits for urban storm water run-off. These areawide NPDES permits are:

   a. Orange County, NPDES No. CA 8000180, Order No. 90-71 (upon renewal NPDES No. CAS 618030, Order No. 96-31)

   b. Riverside County, NPDES No. CA 8000192, Order No. 90-104 (upon renewal NPDES No. CAS 618033, Order No. 96-30)

   c. San Bernardino County, NPDES No. CA 8000200, Order No. 90-136 (upon renewal NPDES No. CAS 618036, Order No. 96-32)

10. Run-off from the San Bernardino County drainage areas is generally conveyed to the Riverside County drainage 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 Dam (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.

11. 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, publicly owned treatment works, 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 storm water to the Riverside County drainage areas. It is expected that these entities will also work cooperatively with the permittees to manage urban run-off. The Regional Board has the discretion and authority to require non-cooperating entities to participate in this areawide permit or to issue individual storm water permits, pursuant to 40 CFR 122.26(a).

Cooperation and coordination among all the stakeholders are critical to optimize the use of limited resources and insure economical management of the watershed. Recognizing this fact, this order focusses on watershed management and seeks to integrate the programs of all the stakeholders, especially the three municipal storm water permit holders, within this watershed.

12. The 1989, 1991, and 1994 Water Quality Assessments by the Regional Board identified impairment of a number of water bodies within the permitted area. The beneficial uses of these water bodies are threatened or impaired in part due to urban storm water run-off and non-storm water flows from urbanized areas. Preliminary results from urban storm water monitoring programs within the Region indicate that major pollutants of concern in urban run-off are certain heavy metals, sediment, coliform bacteria, pesticides, and nutrients. Municipal storm water run-off is a source of pollutants to waters of the Region that may be causing or contributing to water quality impairment. It is recognized that instream or end-of-channel treatment of storm water is difficult and expensive. Therefore, it is critical to identify the pollutant sources and to develop management practices necessary to reduce pollutant loading to storm water. 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 point source discharges permitted by the Regional Board under individual permits.

13. Studies conducted by the EPA, the states, flood control districts and other entities indicate the following major sources of urban storm water pollution nationwide:

    a. Industrial sites where appropriate pollution control and best management practices (BMPs) are not implemented,

    b. Construction sites where erosion and siltation controls and BMPs are not implemented, and

    c. Urban run-off where the drainage area is not properly managed.

14. To address the industrial and construction sites, the State Water Resources Control Board (State Board) issued two statewide general NPDES permits: one for storm water run-off from industrial sites (NPDES No. CAS000001, General Industrial Activities Storm Water Permit) and the second one for storm water run-off from construction sites (NPDES No. CAS000002, General Construction Activity Storm Water Permit). Most industrial activities (some light industrial activities are exempt) and construction activities on five acres or more are required to get individual NPDES permits for storm water discharges, or get coverage under these statewide general permits by completing and filing a Notice of Intent (NOI) with the State Board.

15. In addition, the Regional Board adopted Order No. 94-005, NPDES NO. CA 8000279, for storm water run-off from facilities owned and/or operated by Caltrans, which includes freeways and highways, and Order No. 94-7, NPDES NO. CA 8000336, for concentrated animal feeding operations, including dairies (General Dairy Permit). The Regional Board has issued and continues to issue individual storm water permits for certain industrial facilities within the Region.

16. One of the major components of these statewide permits, the Caltrans permit, and the General Dairy Permit is the requirement for the development and implementation of a storm water pollution prevention plan (SWPPP).

17. The Regional Board is the enforcing authority for the two statewide general permits. However, in most cases, the industrial and construction sites discharge directly into storm drains and/or flood control facilities owned and operated by the permittees. These industrial and construction sites are also regulated under local laws and regulations. Therefore, a coordinated effort between the permittees and the Regional Board is critical to avoid duplicative storm water regulatory activities. A memorandum of understanding between the permittees and the Regional Board may be appropriate to efficiently implement the storm water regulations for industries and construction sites at the local level.

18. The permittees generally conduct inspections of industrial and commercial facilities and construction sites within their jurisdiction to determine compliance with local storm water ordinances and regulations as well as for other regulatory purposes. The permittees have established a subcommittee to develop an enforcement/compliance strategy for industrial and commercial facilities and construction sites. The permittees have agreed to notify Regional Board staff when conditions are observed during such inspections which result in a threat or potential threat to water quality. This also includes failure to obtain coverage under the general storm water permits.

19. The permittees have agreed not to issue grading and/or building permits without proof of compliance for projects subject to the State's General Construction Activity Storm Water Permit.

20. The permittees own/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 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. As part of this order, the permittees will assess public agency activities and facilities for potential impact to storm water quality and develop and implement best management practices to reduce pollutant discharges from those activities/facilities found to be significant sources of pollutants. Non-storm water discharges from these facilities and/or activities 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 of this order or are permitted by the Regional Board under an individual NPDES permit.

21. The major focus of storm water pollution prevention is the development and implementation of an appropriate drainage area management plan (DAMP) including best management practices (BMPs). The ultimate goal of the urban storm water management program is to attain water quality consistent with the water quality objectives for the receiving waters in order to protect beneficial uses. The permittees developed and submitted a DAMP, which was approved on January 18, 1994.

22. The DAMP is a dynamic document and the permittees have implemented, or are in the process of implementing its various elements. The Regional Board also recognizes other drainage area management plans such as the Drainage Water Quality Plan for Lake Mathews (DWQPLM), which includes structural BMPs for pollution control. The RCFC & WCD and Riverside County are involved in the DWQPLM.

23. There is some contribution of pollutants in urban run-off from privately owned and operated facilities such as residences, businesses and commercial establishments and public and private institutions. Therefore, a successful storm water management plan should include the participation and cooperation of the public, businesses, and institutions. Therefore, the DAMP has a strong emphasis on public education.

24. The DAMP included 34 BMPs and a time schedule for implementation. These BMPs are organized into two components: BMPs for existing facilities and BMPs for new development. Both components include regulatory activities, public education programs and operations and maintenance activities.

25. In order to characterize storm water discharges, to identify problem areas, and to determine the effectiveness of the various BMPs, an effective monitoring program is critical. From 1990 through 1995, the principal permittee administered the monitoring program for the permittees which included storm water monitoring, receiving water monitoring, dry weather monitoring and sediment monitoring. The Report of Waste Discharge included a Consolidated Program for Water Quality Monitoring.

26. In order to make the best use of limited resources of all the permittees (including other municipal permittees in San Bernardino and Orange Counties), and to derive maximum benefit from the storm water management programs, future programs should consider and explore approaches and program elements common to all three counties. An integrated management program may be developed with the cooperation of all the stakeholders, including the permittees in the three counties, and the Regional Board. The Regional Board will coordinate the activities within the watershed and seek participation of the permittees

27. The permittees have agreed to revise the implementation agreement that was developed in 1990 as required under Order No. 90-104 to coordinate the activities of the principal and co-permittees.

28. Illegal dumping and illicit/illegal connections and discharges to the storm drains are contributors to storm water and other surface water contamination. All the permittees have completed a reconnaissance survey of the municipal storm drain systems (open channels and underground storm drains). The permittees are required to detect, identify and eliminate illicit/illegal discharges. Additionally, the permittees are required to develop a program to prohibit illegal/illicit connections to their storm drains and flood control facilities.

29. This order requires the permittees to continue to implement the BMPs listed in the DAMP and to effectively prohibit illegal and illicit discharges to the storm drain system. One of the major elements of the DAMP, the Storm Water/Urban Run-off Management and Discharge Controls Ordinance, was adopted by Riverside County on May 9, 1995. The purpose of this ordinance is to reduce pollutant discharges in storm water, and to regulate illicit connections and non-storm water discharges to the storm drain system.

30. 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 planning procedures, in the California Environmental Quality Act (CEQA) review process for specific projects, Master Plans, etc.

31. 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 storm water quality (e.g., Fire Department, Department of Environmental Health, Planning Department, Building and Safety, Code Enforcement, etc.). As such, these organizations are expected to actively participate in implementing this areawide storm water program.

32. The permittees may lack legal jurisdiction over storm water discharges into their systems from some of the State and federal facilities, agricultural land, utilities and special districts, and Native American tribal lands. The Regional Board recognizes that the permittees should not be held responsible for such facilities and/or discharges.

33. The permittees may petition the Regional Board to issue a NPDES permit to any discharger of non-storm water into storm drain systems that the permittees own or operate.

34. 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.

35. The requirements contained in this order are necessary to implement the Basin Plan.

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 control the discharge of pollutants to waters of the United States to the maximum extent practicable.

37. The legislative history and the preamble to the federal storm water regulations indicate that Congress and the U.S. EPA were aware of the difficulties in regulating urban storm water run-off solely through traditional end-of-pipe treatment. However, the U.S. EPA and the State Water Resources Control Board have determined that the NPDES permits for urban storm water run-off must contain effluent limitations based on water quality standards (beneficial uses and water quality objectives). The development and implementation of best management practices (BMPs), which will achieve compliance with applicable standards, are generally considered to be acceptable as effluent limitations. In accordance with Section 402 (p) of the Clean Water Act, this order requires the permittees to develop controls to reduce the discharge of pollutants to the maximum extent practicable. If urban storm water discharges cause an exceedance of the water quality standards in the receiving waters, the BMPs must be reevaluated, revised and implemented as appropriate to address any exceedances of receiving water quality standards. Numeric and narrative water quality objectives are contained in the Basin Plan for the water bodies in this Region. This order does not contain numeric effluent limitations for any constituents because the impact of the storm water discharges on the water quality of the receiving waters has not yet been fully determined. Extensive water quality monitoring and analysis of the data are essential to make that determination. Due to the high cost associated with monitoring, and due to the variability that exists in the current storm water monitoring efforts being conducted by the permittees and other municipal permittees in Orange and San Bernardino Counties under their municipal storm

water permits, a tri-county monitoring program to develop and implement effective monitoring procedures and strategies will be considered.

38. It is the Regional Board's intent that this order shall achieve attainment and protection of the beneficial uses of receiving waters. This order therefore, includes Receiving Water Limitations required to implement water quality objectives and to prevent nuisance and water quality impairment in receiving waters. The Permit requires implementation of control measures in accordance with the approved DAMP that will reduce pollutants in storm water discharges to the maximum extent practicable. The Receiving Water Limitations require the implementation of control measures that are technically and economically feasible as necessary to protect beneficial uses and attain water quality objectives in the receiving waters.

    The Regional Board finds that the unique aspects of the regulation of storm water discharges through municipal storm sewer systems, including intermittent discharges, difficulties in monitoring and limited physical control over the discharge, will require adequate time to implement and evaluate the effectiveness of best management practices and to determine whether they will adequately protect receiving waters. Therefore, the permit includes a procedure for determining whether storm water discharges are causing continuing or recurring exceedances of receiving water limitations and for evaluating whether the approved DAMP must be revised. The permittees will be in compliance with the Receiving Water Limitations so long as the permittees comply with that procedure.

39. The storm water regulations require public participation in the storm water management program development and implementation. 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. In considering the public comments, the permittees may modify reports, plans, or schedules prior to submittal to the Regional Board.

40. 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.

41. 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 storm water discharges are consistent with the federal and state anti-degradation requirements and a complete anti-degradation analysis is not necessary.

42. 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.

43. 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 the regulations and guidelines adopted thereunder, shall comply with the following:

I. RESPONSIBILITIES OF THE PRINCIPAL PERMITTEE:

The principal permittee shall be responsible for managing the overall storm water program and shall:

1. Conduct water quality and hydrographic monitoring of the municipal separate drain system outfalls as agreed upon by the Executive Officer of the Regional Board.

2. Develop criteria for inspections of the municipal storm drain systems.

3. Conduct inspections of the storm drain systems owned and operated by the RCFC&WCD.

4. Implement management programs, monitoring programs, and related plans as required by this order.

5. Enact and revise policies and ordinances necessary to establish and maintain adequate legal authority within the scope of the Riverside County Flood Control and Water Conservation District Act, as required by the Federal Storm Water Regulations, 40CFR, Part 122.26(d)(2)(i)(A-F).

6. Respond and/or arrange for responding to emergency situations such as accidental spills, leaks, illicit discharges/illegal connections, etc., to prevent or reduce the discharge of pollutants to the municipal separate storm drain systems and to waters of the United States.

7. Prepare and submit to the Executive Officer of the Regional Board, unified reports, plans, and programs necessary to comply with this order.

The activities of the principal permittee should include, but not be limited to, the following:

8. Coordinate permit activities and participate in any committees/subcommittees formed to coordinate permit compliance activities.

9. Provide technical and administrative support and inform the co-permittees of the progress of other pertinent municipal programs, pilot projects, research studies, etc.

10. Coordinate the implementation of areawide storm water quality management activities such as monitoring programs, public education, other pollution prevention measures, household hazardous waste collection, etc.

11. Gather and disseminate information on the progress of statewide municipal storm water programs and evaluate the information for potential use in the execution of this order.

12. Monitor the implementation of the plans and programs required by this order and determine their effectiveness in reducing pollutant loadings to surface waters to the maximum extent practicable.

13. Coordinate activities pertaining to implementation of this order with the Regional Board.

14. Solicit and coordinate public input for any major proposed storm water management programs and implementation plans.

15. Develop and implement mechanisms, performance standards, etc., to promote consistent implementation of BMPs among the permittees.

16. In conjunction with the co-permittees, implement the BMPs listed in the approved DAMP.

II. RESPONSIBILITIES OF THE CO-PERMITTEES

Each co-permittee shall be responsible for managing the storm water program within its jurisdiction and shall:

1. Adopt the Grading and Erosion Control Ordinance or its equivalent, within 120 days of adoption of this order.

2. Conduct storm drain system inspections in accordance with the criteria developed by the principal permittee.

3. Enact and revise policies and ordinances necessary to establish and maintain adequate legal authority as required by the Federal Storm Water Regulations, 40CFR, Part 122.26(d)(2)(i)(A-F).

4. Implement management programs, monitoring programs, and related plans as required by this order.

The co-permittees' activities should include, but not be limited to, the following:

5. Administer the storm water and erosion control ordinances adopted pursuant to Item 1., above.

6. Conduct and coordinate with the principal permittee any surveys, monitoring and/or characterizations needed to identify the pollutant sources and drainage areas.

7. Review and comment on all plans, strategies, management programs, monitoring programs, as developed by the principal permittee or any subcommittee to comply with this order.

8. Cooperate in committees and/or subcommittees formed by the principal permittee to address compliance with this order.

9. In conjunction with the principal permittee, implement the BMPs listed in the approved DAMP.

10. Submit to the principal permittee any information necessary to develop unified report submittals to the Executive Officer of the Regional Board.

11. Prepare and submit any specific reports/information related to the permittees' storm water program as deemed necessary by the Executive Officer of the Regional Board.

III. DISCHARGE LIMITATIONS

1. The permittees shall prohibit illicit discharges from entering into the municipal separate storm sewer systems (municipal storm drain systems) and require controls to reduce the discharge of pollutants to the maximum extent practicable.

2. This order authorizes storm water discharges to waters of the State from the permittees' existing municipal separate storm drain systems provided that the permittees implement the BMPs (structural and/or non-structural control measures) necessary to reduce the pollutants in the discharge to the maximum extent practicable. All other discharges are prohibited except those listed under Item 3., below, those for which the Regional Board has issued individual permits, and those discharges which are in accordance with Item 5., below.

3. The following discharges need not be prohibited by the permittees unless identified by the permittees as sources of pollutants to the waters of the United States.

   a. Discharges covered by an NPDES permit, or for which an approval has been issued by the Regional or State Board office;

   b. Discharges from potable water line flushing and other potable water sources;

   c. Discharges from fire fighting and fire hydrant testing and flushing;

   d. Discharges from landscape irrigation, lawn watering and other irrigation activities;

   e. Diverted stream flows:

   f. Rising ground waters and natural springs;

   g. Uncontaminated groundwater infiltration (as defined in 40 CFR 35.2005(20)) and uncontaminated pumped groundwater;

   h. Passive foundation drains;

   i. Air conditioning condensate;

   j. Water from crawl space pumps;

k. Passive footing drains;

l. Discharges from individual residential vehicle washing (not including discharges from mobile sources such as automobile/equipment detailing or washing);

m. Flows from riparian habitats and wetlands;

n. Dechlorinated swimming pool discharges;

o. Street wash water and run-off from fire fighting (program descriptions shall address discharges or flows from fire fighting only where such discharges are identified as significant sources of pollutants to waters of the United States),

p. Waters not otherwise containing wastes as defined in California Water Code Section 13050 (d); and

q. Other types of discharges identified and recommended by the permittees and approved by the Regional Board.

For purposes of this order, a discharge may include storm water and other types of discharges as indicated above.

4. The permittees shall take necessary steps as required under Item 1., above, to ensure that non-storm water discharges to the municipal storm drain system do not cause or contribute to violations of water quality objectives or discharge pollutants to waters of the United States.

5. Non-storm water discharges from permittees' activities into waters of the state are prohibited unless the non-storm water discharges are permitted by an NPDES permit or are included in Item 3., above. If permitting or immediate elimination of the non-storm water discharges is impractical, the permittees shall include in the storm water pollution prevention strategy, required under Section V., Provision 13., of this order, a proposed plan to address the non-storm water discharges.

6. The discharge shall not cause or contribute to degradation of groundwaters.

7. Pollutants in storm water discharges from the municipal separate storm sewer system shall be reduced to the maximum extent practicable.

IV. RECEIVING WATER LIMITATIONS

1. Receiving water limitations are based upon 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 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 2.

   2. If the Executive Officer determines that a continuing or recurring impairment of beneficial uses or exceedance of water quality objectives has been caused by urban storm water discharges from the municipal storm sewer system, the following steps shall be taken:

      a. The Executive Officer will evaluate the adequacy of the permittees implementation of the approved DAMP based on the permittees submitted reports. The Executive Officer will determine if implementation of the approved DAMP has a reasonable likelihood of preventing future continuing or recurring impairment of beneficial uses or exceedances of water quality objectives resulting from urban storm water discharges. If the Executive Officer makes this determination, the permittees are required to continue implementing the approved DAMP.

      b. If the Executive Officer determines that the implementation of the approved DAMP will not have a reasonable likelihood of preventing future impairment of beneficial uses or exceedances of water quality objectives, the permittees shall, upon notice from the Executive Officer, do the following:

         i. Submit a report that includes an evaluation of the relative contribution of the urban storm water discharges to the impairment of beneficial uses or the exceedance of water quality objectives. The report shall address the persistence, the significance, and to the extent feasible, the causes of the impairment or exceedance, and the technical and economic feasibility of control actions available to the permittees to reduce or eliminate the impairment or exceedance.

ii. Submit a report reviewing the approved DAMP to determine whether it should be revised so that there will be a reasonable likelihood of preventing future continuing or recurring beneficial use impairment or exceedances of water quality objectives, or whether revisions to achieve protection of beneficial uses or attainment of water quality objectives are technically or economically infeasible. If the report recommends revision of the approved DAMP, the report shall include a work plan to revise the DAMP so that it will have a reasonable likelihood of preventing future continuing or recurring beneficial use impairment or exceedances of water quality objectives. If the report concludes that no revisions are necessary to achieve protection of beneficial uses or attainment of water quality objectives, the report shall explain how implementation of the approved DAMP will achieve compliance. If the report determines that revisions to achieve protection of beneficial uses or attainment of water quality objectives are technically or economically infeasible, the permittees shall continue to comply with the approved DAMP, shall fully document this determination and shall make recommendations for actions to achieve compliance, including for example, commencement of a total maximum daily load report or revisions of the Basin Plan or mitigation projects to protect beneficial uses, and identification of possible funding sources for such actions.

iii. The permittees shall implement the work plan and the revised DAMP as approved by the Executive Officer.

3. The Executive Officer shall review and approve or disapprove the reports required under Receiving Water Limitation 2. The reports may be submitted as part of the next Annual Report, or at some other time designated by the Executive Officer. So long as the permittees have complied with the procedures set forth in Receiving Water Limitation 2, they do not have to repeat the procedure for continuing or recurring exceedances of the same receiving water limitations. As appropriate, any determinations under this part or revisions to the approved DAMP may be considered by the Regional Board in a public meeting.

V. PROVISIONS

GENERAL

1. Permittees shall demonstrate compliance with all the requirements in this order and specifically with Section III., Discharge Limitations, and Section IV., Receiving Water Limitations, through timely implementation of their approved Drainage Area Management Plan and any approved modifications, revisions, or amendments thereto, which are developed pursuant to this order. The Drainage Area Management Plan and any amendments thereto are hereby made an enforceable part of this order.

2. Permittees shall implement all elements of the approved DAMP. Any proposed revisions to the DAMP shall be submitted to the Executive Officer of the Regional Board for review and approval. All revisions to the DAMP approved by the Executive Officer shall be implemented in a timely manner.

3. The permittees shall comply with Monitoring and Reporting Program No. 96-30, which is hereby made a part of this order, and any revisions thereto. The Executive Officer is authorized to revise the Monitoring and Reporting Program and also to allow the permittees to participate in regional, statewide, national, or other monitoring programs in lieu of Monitoring and Reporting Program No. 96-30.

4. Upon approval by the Executive Officer of the Regional Board, all plans and reports required by this order, including any subsequent amendments, shall be implemented and shall become an enforceable part of this order.

5. The permittees shall report to the Executive Officer of the Regional Board:

   a. Any enforcement actions and known discharges of storm or wastewaters to facilities owned or operated by the permittees which may impair domestic water supply sources (e.g., discharges due to a levee break, illegal discharges to the street, etc.) or which may have an impact on human health or the environment; if the discharge is to Canyon Lake or any tributary to Canyon Lake, Elsinore Valley Municipal Water District shall also be notified immediately;

   b. Any industrial and/or construction facilities found not to be in compliance with the State's General Storm Water Permits or where the activities may be contributing pollutants to the waters of the U.S.; and

c. 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 United States.

6. The permittees shall not issue occupancy permits unless the applicant is informed of his obligation under the State's NPDES industrial general permit. The permittees shall not issue grading or building permits to developments that may result in land disturbance of five 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) unless the applicant shows proof of coverage under the State's General Construction Activity Storm Water Permit. The proof of coverage may include a letter from the Regional Board office, a copy of the Notice of Intent, etc. The permittees shall coordinate the activities of the various departments/sections within each permittee's jurisdiction to insure consistent implementation of storm water regulations.

7. Permit application and special NPDES program requirements contained in 40 CFR 122.21 (a), (b), (d) (2), (f), and (p), 122.41 (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), and (l); and 122.42 (c) are incorporated into this order by reference.

IMPLEMENTATION AGREEMENT

8. No later than June 4, 1996, the permittees shall submit to the Executive Officer of the Regional Board an updated copy of an implementation agreement with authorized signatures of each of the permittees. Any subsequent revisions to the implementation agreement shall be forwarded to the Executive Officer of the Regional Board within 30 days of approval by the permittees. At a minimum, the implementation agreement should include all the essential elements of the existing agreement, developed in accordance with Order No. 90-104.

LEGAL AUTHORITY

9. The permittees shall adopt the proposed Storm Water/Urban Run-off Management and Discharge Control Ordinance, or its equivalent. No later than June, 26, 1996, each permittee shall certify to the Regional Board that it has adequate legal authority to control the discharges of pollutants into the municipal storm drain system and that it has, at a minimum, satisfied each of the key regulatory requirements contained in 40 CFR Section 122.26(d)(2)(i)(A-F).

ENFORCEMENT/COMPLIANCE STRATEGY

10. Permittees shall develop and implement an enforcement/compliance strategy to enforce storm water and erosion control ordinances. This enforcement/compliance strategy should include a mechanism to determine compliance of industrial facilities and construction sites, and notification to the Executive Officer of any finding of non-compliance and any proposed local enforcement action. The enforcement/compliance strategy shall be submitted to the Executive Officer of the Regional Board by August 27, 1996.

PUBLIC EDUCATION AND OUTREACH

11. The permittees shall continue to implement the public education efforts already underway and shall implement all of the proposed efforts identified in the Report of Waste Discharge.

12. When feasible, the permittees shall participate in joint outreach with other programs including, but not limited to, other municipal storm water programs to ensure that a consistent message on storm water pollution prevention is brought to the public.

13. The permittees shall develop public education materials to encourage the public to report illegal dumping from residential, industrial, construction and commercial sites into public streets, storm drains and other water bodies.

MUNICIPAL FACILITIES

14. The permittees shall develop a pollution prevention strategy to address their public agency facilities and activities which are determined by the permittees (with the approval of the Executive Officer of the Regional Board) to be activities of concern regarding storm water pollution. The pollution prevention strategy shall be developed 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 are not sources of pollutants into the waters of the United States. The pollution prevention strategy shall be submitted to the Executive Officer of the Regional Board by October 9, 1996. In developing the pollution prevention strategy, the permittees shall consider the following:

    a. Identification of public agency facilities and activities that are potential contributors of pollutants to waters of the United States.

b. Potential pollutants of concern that are associated with the facilities and/or activities;

c. Proposed BMPs and a schedule for their implementation to ensure that these facilities are not sources of pollutants into the waters of the United States;

d. A monitoring program to measure the effectiveness of the BMPs;

e. A schedule for training of public agency staff to ensure proper implementation of the BMPs; and

f. Identification of any non-storm water discharges from the public agency facilities/activities, frequency of the discharge, characterization of the discharge, volume, flow and duration of the discharge, short term source control BMPs to mitigate the impacts from the discharge, and a schedule for elimination or permitting of the discharge.

MUNICIPAL CONSTRUCTION PROJECTS/ACTIVITIES

15. This Order authorizes the discharge of storm water run-off from construction projects that may result in land disturbance of 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.

16. 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 project, the Executive Officer shall be notified of the completion of the project.

17. The permittees shall develop and implement a storm water pollution prevention plan and a monitoring program that is specific for the construction project prior to the commencement of any of the construction activities. The SWPPP and monitoring program shall be implemented throughout the duration of the construction project. The SWPPP shall be kept at the construction site and released to the public and/ or Regional Board staff upon request.

18. The SWPPP and the monitoring program for the construction projects shall be consistent with the requirements of the most recent version of the State's General Permit for Storm Water Discharges Associated with Construction Activities.

19. 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 current version of the State's General Permit for Storm Water Discharges Associated with Construction Activities.

20. All other terms and conditions of the latest version of the State's General Construction Activity Storm Water Permit shall be applicable.

NEW DEVELOPMENT (INCLUDING RE-DEVELOPMENT)

21. Within 90 days of the issuance of this order, the permittees shall begin implementation of the new development BMPs (DAMP Supplement A) that were developed pursuant to Order No. 90-104.

22. Within 120 days of the issuance of this order, the permittees shall review their General Plan update and CEQA document preparation processes to insure that storm water-related issues are properly considered. If necessary, these processes shall be revised to include requirements for evaluation of storm water-related impacts and identification of appropriate mitigation measures.

23. The permittees shall establish a mechanism to insure proper maintenance and operation of all permanent flood control structures. For new developments, the parties responsible for the maintenance of the flood control structures and funding sources for maintenance and operation of the facilities shall be identified prior to issuance of grading permits.

FISCAL RESOURCES

24. The permittees shall prepare and submit a unified fiscal analysis report appropriate for implementation of the requirements of this order to the Executive Officer of the Regional Board. The fiscal analysis report shall be submitted no later than November 15, 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;

PERMIT EXPIRATION AND RENEWAL

25. This order expires on March 1, 2001 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 map updates; and

    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.

26. 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 and policies 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; or

    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.

    d. To incorporate new or revised program elements and compliance schedule(s) necessary to comply with Section IV of this order.

27. 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.

28. Order No. 90-104 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 March 8, 1996.

Gerard J. Thibeault
Executive Officer

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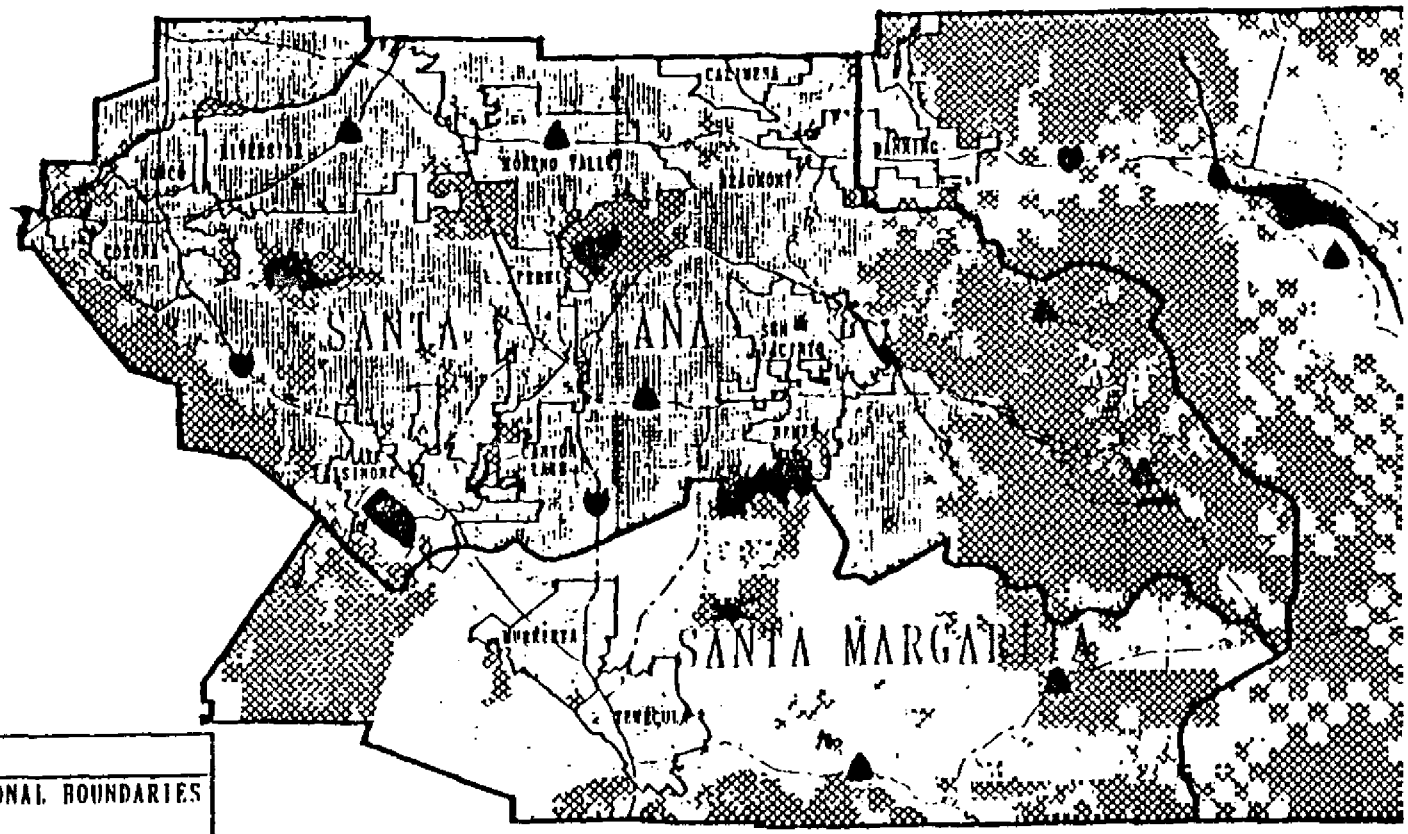
ORDER NO. 96-30
APPENDIX 1
PERMITTED AREA

WESTERN RIVERSIDE COUNTY NPDES PERMIT AREA



N.T.S.

LEGEND

- NPDES PERMIT REGIONAL BOUNDARIES
- SANTA ANA PERMIT
- SANTA MARGARITA PERMIT
- STAT FEDERAL LANDS EXEMPTED FROM DES PERMIT AREAS

* PARC TA WITHIN CITIES MAY NOT BE COMPLETE

This map was made by the Riverside County Geographic Information System. The map elements were produced by the Assessor and the Transportation and Land Management Agency which is comprised of the Administration, Aviation, and Information Resources divisions and the Building & Safety, Planning and Transportation departments. The County of Riverside assumes no warranty or legal respo bility for the information contained on this map. Data and Informatio resented on this m p is subject to update and modification. The Geogra Information S stem and other sources should be queried for the m current information.

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12/08/01

ORDER NO. 96-30
APPENDIX 2

LIST OF OTHER ENTITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS TO STORMWATER FACILITIES

Government Agencies
- Department of the Air Force, March Air Force Base
- Special Districts
- State Parks
- U.S. Army Corps of Engineers

Hospitals
- AMI Circle City Hospital
- Corona Community Hospital
- Riverside Community Hospital
- Riverside General Hospital

Railroads
- AT&SF Railway Company
- Southern Pacific Railroad

School Districts
- Alvord Unified - School District
- Corona - Norco Unified School District
- Hemet Unified School District
- Lake Elsinore Unified School District
- Menifee Union School District
- Moreno Valley Unified School District
- Nuview Union School District
- Perris Elementary School District
- Perris Union High School District
- Riverside Unified School District
- Romoland School District
- San Jacinto Unified School District
- Val Verde School District

Universities and Colleges
- Chapman College
- Mt. San Jacinto College
- Riverside Community College
- University of California Riverside

Water Districts
- Eastern Municipal Water District
- Elsinore Valley Municipal Water District
- Metropolitan Water District
- Western Municipal Water District

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. 96-30

NPDES NO. CAS 618033
for
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, THE COUNTY OF RIVERSIDE, AND THE INCORPORATED CITIES OF RIVERSIDE COUNTY WITHIN THE SANTA ANA REGION AREAWIDE URBAN STORM WATER RUN-OFF

I. GENERAL

1. Revisions of the monitoring and reporting program may be necessary to ensure that the discharger is in compliance with requirements and provisions contained in this order. Revisions may be made by the Executive Officer at any time during the term of this order, 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. All sample collection, handling, storage, and analyses shall be in accordance with 40 CFR Part 136 or other methods approved by the Executive Officer.

3. The permittees are authorized to complement their monitoring data with data from other sources provided those sources are similar to sources in the Santa Ana Watershed.

4. The permittees shall implement the Consolidated Program for Water Quality Monitoring (submitted as part of the Report of Waste Discharge) until development and implementation of other acceptable monitoring programs.

II. OBJECTIVES

The overall goal of this monitoring program is to provide feedback in direction for and in support of an effective watershed management program. The following are the major objectives:

1. To define storm water quality status, trends, and pollutants of concern.

2. To characterize pollutants in storm water and to assess the influence of land use on storm water quality.

3. To identify significant water quality problems related to storm water discharges within the watershed.

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4. To identify other sources of pollutants in storm water run-off to the extent possible (e.g., atmospheric deposition, contaminated sediments, other non-point sources, etc.).

5. To verify and to control illicit discharges.

6. To identify those waters which without additional action to control pollution from storm water discharges cannot reasonably be expected to attain or maintain applicable water quality objectives or the goals and requirements of the Basin Plan.

7. To evaluate the effectiveness of existing management programs, including an estimate of pollutant reductions achieved by the structural and nonstructural BMPs.

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

The lead permittee shall develop and submit for the approval of the Executive Officer an integrated monitoring program to achieve the above stated objectives. In developing this program, the lead permittee is encouraged to seek cooperation with the permittees from San Bernardino and Orange counties. The Executive Officer or his/her designated representative(s) shall facilitate the coordination meetings or subcommittees formed to achieve this goal. The development and implementation of the monitoring program shall be in accordance with the time schedule prescribed by the Executive Officer. At a minimum, the program shall consider the following:

1. Uniform guidelines for quality control, quality assurance, data collection and data analyses.

2. A mechanism for the collection, analysis and interpretation of existing data from Orange, Riverside, and San Bernardino County monitoring programs. These and other data from local, regional or national sources should 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.

3. A description of the monitoring program including:

   a. The number and location of monitoring stations;
   b. Environmental indicators (e. g., ecosystem, biological, habitat, chemical, sediment, stream health, etc.) chosen for monitoring;
   c. Parameters selected for field screening and for laboratory work; and
   d. Total number of samples to be collected from each station, receiving water and major outfall monitoring, frequency of sampling during dry weather and short or long duration storm events, type of samples (grab, 24-hour composite, etc.), and the type of sampling equipment.

4. A mechanism for analyzing the collected data and interpreting the results including an evaluation of the effectiveness of the management practices, and need for any refinement of the management practices.

5. A description of the responsibilities of all the participants in this program including estimated cost.

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 U. S. EPA, Region 9, no later than November 15, of each year. This progress report may be submitted in a mutually agreed upon electronic format. At a minimum, the 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 in reducing pollutant loads in storm water discharges.

   c. An analysis of the feasibility and usefulness of using structural BMPs based on data collected from the Drainage Water Quality Plan for Lake Mathews and/or other similar programs..

d. 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.

3. Co-permittees shall be responsible for the submittal of all required information/materials needed to comply with this Monitoring and Reporting Program in a timely manner to the principal permittee. All such submittals shall be signed by a duly authorized representative of the co-permittee under penalty of perjury.

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	*DUE DATE*
Legal Authority Certification	June 26, 1996
Revised Implementation Agreement	June 4, 1996
Enforcement Strategy	August 27, 1996
Municipal Activities Pollution Prevention Strategy	October 9, 1996
Annual Report including the Fiscal Analyses Report	November 15 of each year (next report due in 1996)

Ordered by _____
Gerard J. Thibeault
Executive Officer

March 8, 1996

California Regional Water Quality Control Board
Santa Ana Region
2010 Iowa Avenue, Suite 100
Riverside, CA 92507-2409

FACT SHEET

March 8, 1996

ITEM: 11

SUBJECT: 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, Storm Water Run-off Management Program, Order No. 96-30 (NPDES No. CAS 618033)

PROJECT

The attached pages contain information concerning an application for renewal of waste discharge requirements and a National Pollutant Discharge Elimination System (NPDES) permit, Order No. 96-30, NPDES No. CAS 618033, which prescribes waste discharge requirements for urban storm water run-off from the cities and the unincorporated areas in Riverside County within the jurisdiction of the Santa Ana Regional Board. On January 3, 1995 the Riverside County Flood Control and Water Conservation District (RCFC&WCD), the County of Riverside, the Cities of Beaumont, Calimesa, Canyon Lake, Corona, Hemet, Lake Elsinore, Moreno Valley, Norco, Perris, Riverside, and San Jacinto (hereinafter collectively referred to as the Permittees), submitted NPDES Application No.CAS 618033 for an area-wide stormwater discharge permit under NPDES. The permit application was submitted in accordance with the previous NPDES permit (Order No. 90-104, NPDES No. CA 8000192) which expired on July 1, 1995. Additionally, the permit application follows guidance provided by staff of the State Water Resources Control Board (State Board) and the Regional Water Quality Control Boards (Regional Boards).

PROJECT AREA

The permitted area is delineated by the San Bernardino-Riverside County boundary line on the north and northwest, the Orange-Riverside County boundary line on the west, the Santa Ana-San Diego Regional Board boundary line on the south, and the Santa Ana-Colorado River Basin Regional Board boundary line on the east. Areas of the County not addressed or which are excluded by the stormwater regulations and areas not under the jurisdiction of the permittees are excluded from the area requested for coverage under this permit application. This includes the following areas and activities:

- Federal lands and state properties, including, but not limited to, military bases, national forests, hospitals, colleges and universities, and highways;

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- Native American tribal lands;
- Open space and rural (non-urbanized) areas;
- Agricultural lands; and
- Utilities and special districts.

As a partial illustration, federal and state lands in Riverside County within the jurisdiction of the Santa Ana Regional Board, for which coverage under a municipal stormwater NPDES permit is excluded, are shown in Appendix A (Western Riverside County NPDES Permit Area).

CLEAN WATER ACT REQUIREMENTS

The Federal Clean Water Act (CWA) allows the United States Environmental Protection Agency (USEPA) to delegate its NPDES permitting authority to states with an approved environmental regulatory program. The State of California is one of the delegated states. The Porter-Cologne Act (California Water Code) authorizes the State Board, through its Regional Boards, to regulate and control the discharge of pollutants into waters of the State and tributaries thereto. Section 405 of the Water Quality Act (WQA) of 1987 added Section 402(p) to the CWA. Pursuant to Section 402(p)(4) of the CWA, the USEPA promulgated regulations for stormwater permit applications for stormwater discharges associated with industrial activities and municipal separate storm drain systems serving a population of 100,000 or more. This permit governing municipal stormwater discharges meets both the statutory requirements of Section 402(p)(3)(B) and all requirements applicable to an NPDES permit issued under the issuing authority's discretionary authority in accordance with Section 401(a)(1)(B) of the CWA.

AREA-WIDE STORMWATER PERMIT

To regulate and control stormwater discharges from the Riverside County area to the municipal storm drain systems, an area-wide approach is essential. The entire storm drain system is not controlled by a single entity; the RCFC&WCD, the County, several Cities, the State Department of Transportation (Caltrans), and the U.S. Army Corps of Engineers, in addition to other smaller entities, manage the systems. In addition to the Cities, the County and the RCFC&WCD, there are a number of other significant contributors of urban stormwater runoff to these storm drain systems. These include: large institutions such as the State university system, schools, hospitals, etc.; federal facilities such as military sites, etc.; State agencies such as Caltrans; water and wastewater management agencies such as Eastern and Western Municipal Water District; the National Forest Service and State parks. The Regional Board has issued a separate NPDES permit to Caltrans. In addition, Caltrans, and the other contributors identified, are not under the jurisdiction of the Permittees. The management and control of the entire flood control system cannot be effectively carried out without the cooperation and efforts of all these entities. Also,

it would not be meaningful to issue a separate stormwater permit to each of the entities within the permitted area whose land/facilities drain into the storm drain systems operated by the Permittees. The Regional Board has concluded that the best management option for the Riverside County area is to issue an area-wide stormwater permit to the RCFC&WCD, Riverside County, and the cities in Riverside County. A separate stormwater NPDES permit has been issued to Caltrans. Stormwater discharges from other state, federal, utility, or special district facilities and state or federal lands will either be added to the Riverside County permit or permitted separately.

Some of the RCFC&WCD storm drain systems discharge into storm drain systems controlled by other entities, such as the Orange County Flood Control District, which is (or will be) regulated under the Regional Board's Order No. 96-30, NPDES No. CA 8000192. Some areas within Riverside County are within the Colorado River Basin and San Diego Regional Boards' jurisdiction. Permit requirements for stormwater runoff from the drainage areas of Riverside County within the jurisdiction of the San Diego and Colorado River Basin Regional Boards are addressed by these Regional Boards.

COORDINATION WITH OTHER REGIONAL AGENCIES

In developing best management practices and monitoring programs, consultation/coordination with other drainage management entities and other Regional Boards is essential. Regional Board staff will coordinate the program with other Regional Boards and other flood control entities/cities on an "as needed" basis. The permit/program process is at the same stage of development in both the Santa Ana and San Diego Regional Board areas of Riverside County. Common programs, reports, implementation schedules and efforts are desirable and will be utilized to the maximum extent practicable.

EXISTING FACILITIES AND PROGRAMS

Within the Santa Ana Region, the RCFC&WCD serves a population of approximately 930,000, occupying an area of approximately 1,360 square miles. The RCFC&WCD's system includes an estimated 200 miles of open and closed storm drains. The storm drain systems operated by the remaining Permittees include an estimated 57 miles of open and closed storm drains. Approximately one-quarter (1/4) of Riverside County drains into water bodies within this Regional Board's jurisdiction. Stormwater discharges from urbanized areas consist mainly of surface runoff from residential, commercial, and industrial developments. In addition, there are stormwater discharges from agricultural land uses, including dairy operations. However, the WQA specifically excludes agricultural discharges from regulation under this program. The constituents of concern and significance in storm water discharges are: total suspended solids, biochemical oxygen demand (BOD), chemical oxygen demand (COD), oil and grease (O&G), heavy metals, nutrients and organic chemicals such as base/neutral and acid extractables, pesticides and herbicides, and petroleum hydrocarbon components.

To protect the beneficial uses of waters of the State, the pollutants from all sources need to be controlled. Recognizing this, and the fact that stormwater discharges contain pollutants, the Permittees and the Regional Board have all agreed that an area-wide stormwater permit is the most effective way to develop and implement a comprehensive stormwater management program in a timely manner. This area-wide stormwater permit contains requirements with time schedules that will allow the Permittees to continue to address water quality problems caused by urban stormwater runoff through their management programs to reduce pollutants in stormwater discharges to the maximum extent practicable.

PERMIT REQUIREMENTS

In accordance with Section 402(p)(3), as part of a program to reduce the pollutants in stormwater discharges to the maximum extent practicable, the Permittees have been required to submit existing management plans and programs being implemented or developed in the previous municipal stormwater NPDES permit to reduce pollutants in stormwater discharges. In addition, the permittees will be required to report, review and/or revise the management programs and control measures in accordance with a time schedule approved by the Executive Officer of the Regional Board for this municipal permit.

If existing management programs are not effective in controlling pollutant loading and in achieving the water quality objectives of the receiving waters, additional programs shall be developed and implemented upon consultation and approval of the Executive Officer.

The permit also requires the development and implementation of management programs and/or best management practices (BMPs) during the life of the permit such that the quality of stormwater discharged can be improved and the water quality objectives of the receiving waters ultimately can be met. It is also expected that through implementation of these programs and/or BMPs the beneficial uses of the receiving waters will be protected.

BENEFICIAL USES

Stormwater flows which are discharged to municipal storm drain systems in Riverside County are tributary to various water bodies (inland surface streams and lake and reservoirs) of the state. The beneficial uses of these water bodies include municipal and domestic supply, agricultural supply, industrial service supply, industrial process supply, groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, and preservation of rare and endangered species. The ultimate goal of this stormwater management program is to protect the beneficial uses of the receiving waters.

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 stormwater 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 stormwater discharges and receiving waters will be improved, thereby protecting the beneficial uses of waters of the United States. This is consistent with the federal and state antidegradation requirements and a complete antidegradation analysis is not necessary.

PUBLIC WORKSHOP

The Regional Board recognizes the significance of Riverside County's Storm Water/Cleanwater Protection Program and will conduct, participate, and/or assist with at least one workshop every year during the term of this permit to promote and discuss the progress of the stormwater management program. The details of the annual workshop will be 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 permit may register their name, mailing address and phone number with the Regional Board office at the address given below.

PUBLIC HEARING

The Regional Board will hold a public hearing regarding the proposed waste discharge requirements. The public hearing is scheduled to be held on March 8, 1996, starting at 9:30 a.m. at the City Council Chambers, 3300 Newport Boulevard, Newport Beach, California. Further information regarding the conduct and nature of the public hearing concerning these waste discharge requirements may be obtained by writing or visiting the Santa Ana Regional Board office, 2010 Iowa Avenue, Suite 100, Riverside, CA 92507.

INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Pavlova Vitale at 909/782-4920. 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 10:00 a.m. and 4:00 p.m., Monday through Thursday (excluding holidays).

REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group for applications may leave his name, 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.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

ORDER NO. R8-2002-0011
NPDES NO. CAS 618033

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
AREAWIDE URBAN RUNOFF

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter the "Regional Board") finds that:

1. On August 30, 2000, the Riverside County Flood Control and Water Conservation District (hereinafter referred to as "RCFC&WCD" or "Principal Permittee", as context indicates), 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 (hereinafter with the County, collectively referred to as the "Co-Permittees", and collectively with the Principal Permittee, the "Permittees"), jointly submitted a National Pollutant Discharge Elimination System (NPDES) Application No. CAS 618033, a Report of Waste Discharge (the "ROWD"), to renew the municipal separate storm sewer system ("MS4") NPDES permit for the Santa Ana River Watershed (the "Region") within Riverside County (the "Order") dealing with urban storm water runoff (hereinafter as defined and qualified in Findings 13 and 14, below, "Urban Runoff") in the "Permit Area" that includes the "Urban Area" as shown in Appendix 1 and those portions of "Agriculture" and "Open Space" as shown on Appendix 1 that convert to industrial, commercial or residential use during the term of this Order. 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 will continue as the Co-Permittees.

2. On February 16, 1999, the City of Murrieta annexed 1,124 acres, increasing the land area of the City to 18,273 acres. Of the acreage annexed, approximately 375 acres (or 2% of the City's land area) was in the unincorporated area of Riverside County within the Region. The Regional Board's construction database shows that approximately 247 acres out of 375 acres are proposed for development based on Notice of Intent ("NOI") submittals. The City of Murrieta has expressed its intent to be a Co-Permittee in this Order and for the purposes of this Order shall be considered as such.

3. On July 13, 1990, the Regional Board adopted the original Riverside County regional MS4 permit, Order No. 90-104 (NPDES No. CA 8000192), for Urban Runoff from areas in Riverside County within the Permit Area. On March 8, 1996, the Regional Board renewed Order No. 90-104 by adopting the second regional MS4 permit, Order No. 96-30, (NPDES No. CAS618033). Order No. 96-30 expired on March 1, 2001, and on March 2, 2001; Order No. 96-30 was administratively extended in accordance with 40CFR Part 122.6 and Title 23, Division 3, Chapter 9, Section 2235.4 of the California Code of Regulations.

4. This Order renews Order No. 96-30 (NPDES No. CAS618033), and regulates discharges of Urban Runoff from MS4s within Riverside County under the jurisdiction of and/or maintenance responsibility of the Permittees. This Order is intended to regulate the discharge of "pollutants" (as defined in Appendix 4, Glossary) in Urban Runoff from anthropogenic (generated from non-agricultural human activities) sources under the control of the Permittees and is not intended to address background or naturally occurring pollutants or flows.

5. The federal Clean Water Act (the "CWA") established a national policy designed to help maintain and restore the physical, chemical and "biological integrity" (as defined in Appendix 4, Glossary) of the nation's waters. In 1972, the CWA established the NPDES permit program to regulate the discharge of pollutants from "point sources" (as defined in Appendix 4, Glossary) to waters of the nation (the "Waters of the U. S."). 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" (as defined in Appendix 4, Glossary), 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.

6. Studies conducted by the United States Environmental Protection Agency (the "USEPA"), the states, counties, cities, flood control districts and other political entities dealing with urban "storm water" (as defined in Appendix 4, Glossary) runoff indicate the following major sources of Urban Runoff "pollution" (as defined in Appendix 4, Glossary) 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. Runoff from urbanized areas.

7. The 1987 amendments to the CWA added Section 402(p) that required the USEPA to develop permitting regulations for storm water discharges from MS4s 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.

8. 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 Maximum Extent Practicable (the "MEP") [See discussion of this term in the Glossary, Appendix 4]. 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 promulgated pursuant thereto allow each state the flexibility to decide what constitutes the MEP.

[1] Best Management Practices (BMPs) are water quality management practices that are maximized in efficiency for the control of storm water runoff pollution.

9. 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

10. Consistent with the CWA and the USEPA regulations promulgated pursuant thereto, the State Water Resources Control Board (the "State Board") and the Regional Board have adopted a number of permits to address pollution from the sources identified in Finding 6, above. Industrial activities (as defined in 40 CFR 122.26(b)(14)) and construction sites of five acres or more 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.

    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. Regional Board Order No. 01-34, adopted on January 19, 2001, for storm water discharges associated with new development (construction) to surface waters in the San Jacinto sub-watershed ("San Jacinto Watershed Construction Activities Permit").

    e. The Regional Board also issues individual storm water permits for certain industrial facilities within the Santa Ana River Watershed. Currently there is one industrial storm water NPDES permit that has been issued by the Regional Board for a 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.

11. The San Bernardino County Flood Control District and RCFC&WCD, in cooperation with local affected municipalities, are coordinating an effort to construct flood control facilities in the Chino-Corona Agricultural Preserve area (the "Preserve Area") located on the border of San Bernardino and Riverside Counties. The Preserve Area has the highest concentration of dairy

animals in the nation. The ground and surface water quality in the Preserve Area have been adversely impacted by these dairy operations. The dairies within the Permit Area are regulated under the Regional Board's "General Dairy Permit" (Order No. 99-11, NPDES No. CAG018001). The General Dairy Permit allows discharge of storm water from dairies only for storms exceeding a 24-hour, 25-year frequency. The portion of the Preserve Area within San Bernardino County lacks appropriate flood control facilities, and runoff from upstream urbanized areas within San Bernardino County often inundates some of the dairies in the Preserve Area, even during light or moderate storm and runoff events. This causes dairy waste containment facilities to fail and overflow into surface drainage facilities. This overflow causes nutrient, total dissolved solids (TDS), total suspended solids (TSS), and microbial problems in the "receiving waters" (as defined in Appendix 4, Glossary). However, there are only small areas of urbanized development in Riverside County upstream of the dairies subject to flooding. The RCFC&WCD is the lead agency responsible for engineering, design, contract administration, environmental review, and overall project management of the County Line Channel whose construction is intended to address this problem.

12. Section 13225 of the California Water Code (the "Water Code") identifies the Regional Board as being the enforcement authority for NPDES permits, including the General Industrial Activities Storm Water Permit (referenced in Finding 10.a., above) and the Construction Activity Storm Water Permits (referenced in Finding 10.b. and 10.d, above) (collectively, the "General Storm Water Permits"). However, in many areas, the industrial and construction sites discharge directly into MS4s owned and operated by the Permittees. These industrial and construction sites are also regulated under local ordinances and regulations. The Co-Permittees review plans for developments in accordance with the "Subdivision Map Act" (Section 66400 et seq. of the California Government Code), the California Environmental Quality Act ("CEQA") (Section 21000 et seq. of the California Public Resources Code), and local general plans and implementing ordinances and regulations to assure that new developments proceed in an orderly, and safe manner, consistent with each Co-Permittee's general plan. This Order establishes a responsibility of the Permittees to manage Urban Runoff. 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 General Storm Water Permits. As part of 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 activity fails to obtain coverage under the appropriate General Storm Water Permit. To more effectively coordinate these activities, the Regional Board staff intends to post their inspection activities related to administration of the General Storm Water Permits on the Regional Board website.

13. Urban Runoff includes those discharges from residential, commercial, industrial, and construction areas within the Permit Area and excludes discharges from feedlots, dairies, farms, and open space (also see Finding 14, below). Urban Runoff discharges consist of storm water and "non-storm water" (as defined in Appendix 4, Glossary) surface runoff from drainage sub-areas with various, often mixed, land uses within all of the hydrologic drainage areas that discharge into the Waters of the U. S. In addition to Urban Runoff, the MS4s regulated by this Order receive flows from agricultural activities, open space, state and federal properties and other non-urban land uses not under the control of the Permittees. The quality of the discharges from the MS4s 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 discharges[2] and illicit connections[3].

14. The Permittees lack legal jurisdiction over storm water discharges into their respective MS4s from agricultural activities, California and federal facilities, utilities and special districts, Native American tribal lands, wastewater management agencies and other point and non-point source discharges otherwise permitted by or under the jurisdiction of 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 are beyond the ability of the Permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography.

15. Urban Runoff may contain elevated levels of pathogens (bacteria, protozoa, viruses), “sediment” (as defined in Appendix 4, Glossary), 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). Urban Runoff can carry these pollutants 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. These pollutants can then impact the beneficial uses of the receiving waters and can cause or threaten to cause a condition of pollution or “nuisance” (as defined in Appendix 4).

16. 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 can cause “toxicity” (as defined in Appendix 4, Glossary) 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. However, it is recognized that storm flows from non-urbanized areas such as "National Forest," "State Park," "Wilderness," and "Agriculture", as shown on Appendix 1, naturally exhibit high levels of

[2] Illegal discharge means any disposal, either intentionally or unintentionally, of material or waste to land or MS4s that can pollute storm water or create a nuisance. The term illegal discharge includes any discharge to the MS4 that is not composed entirely of storm water, except discharges pursuant to an NPDES permit, discharges that are identified in Section II. C. of this Order, and discharges authorized by the Executive Officer.

[3] Illicit Connection means any connection to the storm drain system that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit connection includes all non storm-water discharges and connections except discharges pursuant to an NPDES permit, discharges that are identified in Section II, Discharge Limitations/Prohibitions, of this Order, and discharges authorized by the Executive Officer.

suspended solids due to climate, hydrology, geology and geography.[4] Toxic substances (from pesticides, petroleum products, metals, and industrial "wastes" (as defined in Appendix 4, Glossary)) 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) 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.

17. The water quality assessment conducted by Regional Board staff has identified a number of beneficial use impairments due, in part, to agricultural and Urban Runoff. Section 303(b) of the CWA requires each of California's Regional Water Quality Control Boards 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 ("Impaired Waterbody"). The 1998 water quality assessment listed a number of water bodies within the Permit Area as impaired pursuant to Section 303(d). In the Permit Area, these include: Canyon Lake (for nutrients and pathogens); Lake Elsinore (for nutrients, organic enrichment/low D.O., unknown toxicity and sedimentation); Lake Fulmor (for pathogens); Santa Ana River, Reach 3 (for nutrients, pathogens, salinity, TDS, and chlorides); and Santa Ana River, Reach 4 (for pathogens). However, the Regional Board now recognizes that Reach 3 of the Santa Ana River is meeting the standards for nutrients, salinity, TDS and chlorides and has requested that this Reach be de-listed for these constituents in the 2002 CWA 303(d) list.

18. 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 and still attain "water quality standards" (as defined in Appendix 4, Glossary) in the receiving water, i.e., Receiving Water quality objectives are met and the beneficial uses are protected. The TMDL is the sum of the individual Waste Load 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 one of the bases for limitations established in waste discharge requirements ("Waste Discharge Requirements" and defined in Appendix 4, Glossary). TMDLs are being developed for sediment, pathogens, and nutrients for Lake Elsinore and Canyon Lake. The Permittees are providing assistance and cooperating with Regional Board staff in the TMDL efforts. The Permittees shall revise their Drainage Area Management Plan ("DAMP," and defined in Appendix 4, Glossary), at the direction of the Regional Board Executive Officer (the "Executive Officer"), to incorporate program implementation amendments so as to comply with Regional, "watershed" (as defined in Appendix 4, Glossary) specific requirements, and/or WLAs developed and approved pursuant to the process for the designation and implementation of TMDLs for Impaired Waterbodies.

19. The area shown on Appendix 1 contains 1,293 square miles (or 17.7% of the 7,300 square miles within Riverside County) and includes 11 of the 24 municipalities within Riverside

[4] 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.

County. The California Department of Finance estimates that as of January 1, 2002, the population of Riverside County is 1,644,341 of which 759,877 persons reside within the 11 municipalities and an additional 338,630 persons reside in the unincorporated area that is within the area shown on Appendix 1 (or a total of 1,098,507 persons or 66.8% of Riverside County's population). Five of the municipalities (Beaumont, Calimesa, Canyon Lake, Norco, and San Jacinto) have populations of 25,000 or less; three municipalities (Hemet, Lake Elsinore, and Perris) have populations between 25,001 and 62,000, Corona has a population of 133,966, Moreno Valley's population is 146,435 and Riverside has 269,402 residents. [Population figures for the city of Murrieta have been omitted because only 375 acres (2%) of the City's Land Area is within the area shown on Appendix 1. (See Finding No. 2.)] Of the total territory within the area shown on Appendix 1, 346.7 square miles are within the 11 incorporated areas and 944.6 square miles are unincorporated. General land uses within the 1,293.3 square miles comprising the area shown on Appendix 1 are identified, based on Riverside County Assessor's Roll for Fiscal Year 2001-2002, as follows: 109.3 square miles are used or zoned for commercial/industrial purposes (8.5%), 198.7 square miles for residential purposes (15.4%), 70.1 square miles are utilized for improved roadways (including roadways owned by Caltrans) (5.4%), 753.9 square miles are vacant or utilized for open space (58.3%), and 161.3 square miles are used for agricultural purposes (12.5%). The federal government owns 310.7 square miles (24%) of the territory within the area shown on Appendix 1.

20. Some portions of Riverside County within the Permit Area have been developed or zoned for residential, commercial and industrial uses. Urban development generally increases the area of impervious surfaces and storm water runoff volume and velocity; and decreases the area of previously vegetated surfaces available for infiltration of storm water, depending on soils, topography, climate, precipitation volume and patterns, and other factors. Based on the procedures in Section D of the Hydrology Manual of RCFC&WCD, dated April 1978, it is feasible that, in semi-arid regions, development may result in the creation of a net increase in absorption. Increases in runoff volume and velocity may cause scour, erosion (sheet, rill and/or gully), aggradation (raising of a streambed from sediment deposition), changes in fluvial geomorphology, hydrology, and changes in aquatic ecosystem (collectively, "Conditions of Concern"). The Permittees are the owners and operators of MS4s and have authority (except as qualified in Finding 14, above) to control most of the discharges of Urban Runoff to these systems. The Permittees have established appropriate legal authority to address their respective MS4s exposure to pollutant loads from discharges of Urban Runoff and have enhanced the design requirements for MS4s to address these potential discharges from new development. Co-Permittees have adopted grading and/or erosion control ordinances, guidelines and BMPs for municipal, commercial, and industrial activities, and along with RCFC&WCD, have approved and begun implementation of the DAMP. The Permittees have implemented most of the programs and policies that they developed. They must continue to implement an effective combination of these programs, policies, and legal authority, modify and enhance such programs and policies, and other additional requirements as identified herein, to ensure that pollutant loads resulting from Urban Runoff are properly controlled and managed to the MEP."

21. The Permittees own and/or operate MS4s through which Urban Runoff is discharged into the Waters of the U. S. The Permittees have identified major outfalls (with a pipe diameter of 36 inches or greater or drainage areas draining 50 acres or more) and have submitted maps of

existing MS4s. The Co-Permittees reported having approximately 153.3 miles of underground storm drains, and 21.3 miles of channels. The RCFC&WCD reported having 135 miles in underground storm drains and 133 miles of channels.

22. The MS4s generally contain non-storm water flows that may include runoff from agriculture and landscape irrigation, residential car washing, miscellaneous washing and cleaning operations, and other nuisance flows. In addition, these facilities are used to convey water produced from the Arlington Desalter and deliveries of other water for water conservation. During normal dry weather conditions, very little Urban Runoff reaches Receiving Waters[5]. Non-storm water discharges into the MS4s and to the Waters of the U. S. containing pollutants are prohibited, unless they are regulated under a separate NPDES permit; certain types of non-storm water containing insignificant amount of pollutants are exempt as indicated in Discharge Limitations/Prohibitions, Section II. C. of this Order.

23. Order No. 90-104 and Order No. 96-30 required the Permittees to: (1) develop and implement the DAMP and Urban Runoff and Receiving Water monitoring and reporting programs; (2) eliminate illegal discharges and illicit connections to the MS4s; and (3) enact the necessary legal authority to effectively prohibit such illegal discharges and illicit connections. The overall goal of these requirements was to reduce pollutant loading to surface waters from Urban Runoff to the MEP. The DAMP outlines the major programs and policies for controlling pollutants in Urban Runoff and the DAMP was approved by the Executive Officer on January 18, 1994. Since then, the Urban Runoff monitoring program has been expanded and the DAMP continues to be a dynamic document. This Order requires the Permittees to continue to implement the BMPs listed in the DAMP, and update or modify the DAMP, when appropriate, consistent with the MEP and other applicable standards; and to continue to effectively prohibit illegal discharges and illicit connections to their respective MS4s.

24. A revised Water Quality Control Plan (the "Basin Plan") was adopted by the Regional Board and became effective on January 24, 1995. The Basin Plan defines the numeric and narrative water quality objectives and beneficial uses of the receiving waters in the Region. These beneficial uses include municipal and domestic supply, agricultural supply, industrial service supply, groundwater recharge, hydropower generation, water contact recreation, non-contact water recreation and sportfishing, warm freshwater habitat, cold freshwater habitat, preservation of biological habitats of special significance, wildlife habitat and preservation of rare, threatened, or endangered species. The Basin Plan also incorporates by reference all State Board water quality control plans and policies.

25. The ultimate goal of the MS4 permit is to protect these beneficial uses of the Receiving Waters by ensuring that the flows from MS4s do not cause or contribute to an exceedance of "water quality objectives" (as defined in Appendix 4, Glossary) for the Receiving Waters. The DAMP identifies programs and policies, including BMPs, to achieve this goal. These BMPs are organized into two components: BMPs for existing facilities and BMPs for new development. Both components include regulatory activities, public education programs, solid waste management, and operations and maintenance activities.

[5] Based upon a field investigation report of the Storm Drain Outlets into the Santa Ana River conducted by the RCFCD&WCD and dated May 28, 2002.

26. 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.

27. The Co-Permittees have developed conditions of approval for projects requiring coverage under the Construction Activity Permits for maps or permits requiring discretionary approval that are to be satisfied prior to issuing a grading or building permit for construction sites of five acres or more. After March 10, 2003, these conditions of approval will be extended to construction sites on one (1) acre or more, consistent with the acreage criteria of the current Construction Activity Permits.

28. This Order requires the Permittees to continue to implement the BMPs listed in the approved DAMP and to continue to effectively prohibit illegal discharges and illicit connections to their respective MS4s. One of the major elements of the DAMP is a Storm Water/Urban Runoff Management and Discharge Control Ordinance and each of the Co-Permittees has adopted such an ordinance and ordinances addressing grading and erosion control (collectively, the "Storm Water Ordinance"). The purpose of each Storm Water Ordinance is to prohibit pollutant discharges in the Permittees respective MS4s and to regulate illicit connections and non-storm water discharges to said MS4s.

29. The California Constitution and Government Code create in the Co-Permittees planning police 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 to the Receiving Waters within the Permit Area from Urban Runoff.

30. This Order requires the Permittees to examine the source of pollutants in Urban Runoff from those activities that the Permittees conduct, approve, regulate and/or for which they issue a license or permit. This Order also requires the implementation of control measures to protect beneficial uses and attain "Receiving Water Quality Objectives", as defined in the Basin Plan.

31. 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, inspect each site for which a grading or building permit has been issued for compliance with the conditions of approval governing the permit. These inspections have been expanded by several of the Co-Permittees to survey and address issues related to prevention of Urban Runoff and to determine that a site has secured coverage under the General Construction Activity Storm Water Permit. Once a certificate of occupancy has been issued, the Co-Permittees have limited jurisdiction to inspect the site on an ongoing basis. The Permittees have established the "Enforcement/Compliance Strategy," dated December 20, 2001 (the "E/CS") that addresses compliance strategies with regard to

industrial, and commercial facilities and construction sites. In addition, 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" (the "CAP") which includes a storm water survey component as part of existing inspections of hazardous material handlers and retail food service activities. The initial phase of the CAP consisted primarily of educational outreach to the inspected facilities. The CAP has entered a second phase, which involves a detailed storm water compliance survey for each facility that must secure a "hazardous materials" (as defined in Appendix 4, Glossary) 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). 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. Any completed surveys that indicate non-compliance are forwarded to the appropriate jurisdiction's code enforcement division. In addition, the cities of Corona and Riverside, which operate publicly owned treatment works ("POTW"), in combination conduct annually on average, approximately 4,400 wastewater pre-treatment inspections, on a variety of industrial and commercial establishments, 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 General Storm Water Permits or a permit issued by the Regional Board.

32. 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 also 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. As part of Order 96-30, the Permittees were required to assess public agency activities and facilities for potential impact to Urban Runoff quality and develop their agency-specific "Municipal Facility Strategy". This Order requires the Permittees to continue to implement BMPs that are reducing pollutant discharges from those activities/facilities found to be significant sources of pollutants in Urban Runoff. This Order prohibits non-storm water discharges from facilities owned or operated on behalf of the Permittees unless the discharges are exempt under the Discharge Limitations/Prohibitions Section II. C. of this Order or are permitted by the Regional Board under an individual NPDES permit.

33. An effective monitoring program characterizes Urban Runoff discharges, identifies problem areas, and determines the impact of Urban Runoff on Receiving Waters and the effectiveness of BMPs. The Principal Permittee administers the Consolidated Program for Water Quality Monitoring[6] (the "CMP") for the Permittees. The CMP includes wet and dry weather monitoring

[6] Consolidated Program for Water Quality Monitoring, Riverside County Flood Control and Water Conservation District, March 1994.

of MS4 outfalls and Receiving Waters. The DAMP (at page 2-4, 1993) indicates that lead, copper, manganese, zinc, BOD, hardness, and nitrates for some of the dry weather samples analyzed exceeded the water quality objectives in samples collected prior to the DAMP. These and other water quality indicators are tabulated on page 2-6 of the DAMP.

34. The Permittee's 2000 Annual Report (Pursuant to each NPDES MS4 permit issued by the Regional Board to the Permittees, there is a requirement that an annual report (the "Annual Report") be filed with the Regional Board on or before each November 30th) summarized wet weather monitoring data collected between July 1990 and July 2000. This summary shows that the average concentration values for a wide array of pollutants do not exceed the Receiving Water Quality Objectives. However, for numerous constituents, the summary contains several maximum-recorded concentrations that exceed these Receiving Water Quality Objectives. The summary also includes data from the period prior to implementation of the DAMP approved by the Executive Officer in January 1994.

35. In general, the data as presented in the 2000 Annual Report are inconclusive in regard to identification of the pollutant trends and compliance or non-compliance with "Receiving Water Limitations"[7] in various drainage areas represented by the monitoring stations. Consequently, this Order requires the Permittees, in consultation with Regional Board staff, to re-evaluate prior monitoring data to identify the areas with elevated pollutant concentrations to focus their source reduction efforts. Also, this Order requires the Permittees to revise the CMP to provide more effective data to support Urban Runoff management. The Permittees will continue their current monitoring efforts on those priority areas pending development and approval of the revised CMP.

36. This Order requires the Permittees to make all necessary revisions to an agreement entitled "NPDES Stormwater Discharge Permit – Implementation Agreement" dated November 12, 1996 (the "Implementation Agreement"). The Implementation Agreement establishes the responsibilities of each party and a funding procedure for the shared costs.

37. By January 1, 2003, the State Board is required by Water Code Section 13383.5 (Stats. 2001, c. 492 (S.B. 72)) to develop a statewide municipal storm water (Urban Runoff) monitoring and reporting program. Once this statewide program has been developed, the Permittees will be required to develop a revised monitoring and reporting program as specified in this Order and consistent with new requirements developed by the State Board.

38. 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 storm water permits.

[7] Receiving Water Limitations are requirements included in this Order 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.

39. Cooperation and coordination among the stakeholders (regulators, Permittees, the public, and other entities) are critical to optimize the use of limited resources and ensure economical management of the watershed. Recognizing this fact, this Order focuses on watershed management and seeks to integrate the programs of the stakeholders, especially the holders of the three MS4 permits within the Region.

40. The Regional Board recognizes that a watershed management program should integrate related programs, including the Urban Runoff program and TMDL processes.

41. Illegal discharges to the MS4s can contribute to "contamination" (as defined in Appendix 4, Glossary) of Urban Runoff and other surface waters. The RCFC&WCD was required by Order No. 90-104 to conduct an inspection of underground storm drains and only one illicit connection could be identified. Open channels and other aboveground elements of the MS4s are inspected for evidence of illegal discharges as an element of routine maintenance by the Permittees. The Permittees also developed a program to prohibit illegal discharges and illicit connections to their MS4s. Continued surveillance and enforcement of these programs are required to eliminate illicit connections and illegal discharges. The Permittees have a number of procedures in place to eliminate illicit connections and illegal discharges to the MS4s, including construction, commercial, and industrial facility inspections, drainage facility inspections, water quality monitoring and reporting programs, and public education.

42. The Permittees have the authority to control pollutants in Urban Runoff discharges, to prohibit illicit connections and illegal discharges, to control spills, and to require compliance and carry out inspections of the MS4s 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. The Co-Permittees are required by this Order to review their respective Storm Water Ordinances and other ordinances, regulations, and codes adopted by them to determine whether the language of said ordinances, regulations, and codes needs to be modified or expanded to allow for enforcement actions, including civil and/or criminal penalties, to be brought by each Co-Permittee consistent with the provisions of this Order.

43. "Pollution prevention" (as defined in Appendix 4, Glossary) techniques implemented to the MEP, appropriate planning review procedures, early identification of potential Urban Runoff impacts and mitigation measures may reduce pollution associated with Urban Runoff. The Co-Permittees consider these impacts and appropriate mitigation measures in their respective, land use approval processes and CEQA review processes for development projects to insure consistency with their respective general plans. This Order requires the Co-Permittees to review their respective CEQA review processes, general plans, zoning ordinances, and related regulations and codes to determine the need for any revisions.

44. The legislative history and the preamble to the federal storm water regulations indicate that Congress and the USEPA were aware of the difficulties in regulating Urban Runoff solely through traditional end-of-pipe treatment. However, it is the Regional Board's intent that this Order requires the implementation of BMPs to reduce, to the MEP, the discharge of pollutants in Urban Runoff from the MS4s in order to support attainment of water quality standards. This Order, therefore, includes Receiving Water Limitations based upon water quality objectives, prohibiting the creation of nuisances and requiring the reduction of water

quality impairment in the Receiving Waters. In accordance with Section 402 (p) of the CWA, this Order requires the Permittees to implement control measures that will reduce pollutants in Urban Runoff discharges to the MEP. The Receiving Water Limitations similarly require the implementation of control measures to protect beneficial uses and attain water quality objectives of the Receiving Waters.

45. The Regional Board finds that the unique aspects of the regulation of Urban Runoff discharges through MS4s, including, but not limited to, 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, this Order includes a procedure for determining whether Urban Runoff discharges are causing or contributing to exceedances of Receiving Water Limitations and for evaluating whether the DAMP must be revised in order to comply with this aspect of this Order. This Order establishes an iterative process to achieve compliance with the Receiving Water Limitations.

46. Less than one fifth (1/5) of the entire acreage within Riverside County drains into water bodies within the Permit Area. Sixty-seven percent of Riverside County's population resides within the Permit Area. The San Diego and the Colorado River Basin Regional Water Quality Control Boards regulate Urban Runoff from those portions of Riverside County outside of the Permit Area.

47. The Santa Ana Watershed is one of the major watersheds within Southern California. This watershed is divided into three sub-watersheds: the "Lower Santa Ana," the "Upper Santa Ana", and the "San Jacinto". The Lower Santa Ana sub-watershed (downstream from Prado Basin) includes the north half of Orange County and the Upper Santa Ana sub-watershed includes the southwestern corner of San Bernardino County and the northwestern corner of Riverside County. The San Jacinto sub-watershed includes the northwest corner of Riverside County south of the Upper Santa Ana sub-watershed.

48. 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 POTWs. POTW discharges are regulated under 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 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.

49. Generally, the portion of the Upper Santa Ana sub-watershed located within San Bernardino County drains to the portion of the Upper Santa Ana sub-watershed within Riverside County and the portion of the Upper Santa Ana sub-watershed located within Riverside County and the San Jacinto sub-watershed drain to Orange County through the Prado Basin and Dam. Prado Dam detains the flows of the Upper Santa Ana and San Jacinto sub-watersheds, specifically Reaches 3 and 4 of the Santa Ana River, and supports an extensive man-made wetlands system, that provides treatment of the detained water. Most of the flow in the Santa Ana River is released from Prado Dam and recharged into the ground water in Orange County. However, as a result of infrequent heavy storm events, flows leaving Prado Dam may continue to coastal waters of the Pacific Ocean.

50. Water from rainfall, snow melt runoff, and surfacing ground water from various areas within the Permit Area either discharge directly to the Santa Ana River or to watercourses tributary to the Santa Ana River. Other major rivers within the Permit Area include the San Jacinto River and Temescal Creek. The San Jacinto Mountain areas drain into the San Jacinto River, which discharges into Canyon Lake and thence into Lake Elsinore. Any overflow from Lake Elsinore is tributary to Temescal Creek, which flows into the Santa Ana River at the Prado Basin. Overflow from Lake Elsinore occurs infrequently, only once every 12 to 15 years.

51. The requirements contained in this Order are necessary to implement the Basin Plan. This Order does not contain "numeric effluent limitations" (as defined in Appendix 4, Glossary) for any constituent because the impact of the Urban Runoff discharges on the water quality of the Receiving Waters has not yet been fully determined and because the State Board and the USEPA have determined that numeric effluent limits are not required in the MS4 permits. Continuation of water quality/biota monitoring and analysis of the data are essential to make that determination. The Basin Plan or amendments thereto, may be grounds for the Permittees to revise the DAMP.

52. The Permittees will be required to comply with future water quality standards or discharge requirements, which may be imposed by the USEPA or State of California prior to the expiration of this Order. This Order may be reopened to include WLAs or LAs to address pollutants in Urban Runoff causing or contributing to the impairments in Receiving Waters and/or other requirements developed and adopted by the Regional Board.

53. The Permittees may petition the Regional Board to issue a separate NPDES permit to any discharger of non-storm water into MS4s that they own or operate.

54. The Permittees have implemented programs to control litter, trash, and other anthropogenic materials in Urban Runoff. In addition to the municipal ordinances prohibiting litter, the Permittees should continue to participate or organize a number of other programs such as solid waste collection programs, household hazardous waste collections, hazardous material spill response, catch basin cleaning, additional street sweeping, and recycling programs to reduce litter and illegal discharges. These programs should effectively address urban sources of these materials. This Order includes requirements for continued implementation of these programs for litter, trash, and debris control.

55. The Regional Board recognizes the importance of watershed management initiatives and regional planning and coordination in the development and implementation of programs and policies related to Receiving 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 and reporting programs to regional monitoring programs may be necessary. The Executive Officer is authorized to approve, after proper public notification and consideration of 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 acceptable to the Executive Officer. These documents will be posted at the Regional Board's website and interested parties will be notified. In

addition, the website will include the administrative and civil procedures to appeal any decision made by the Executive Officer.

56. The 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 with the Annual Reports due each November 30th. In response to public comments, the Permittees may modify reports, plans, or schedules prior to submittal to the Executive Officer.

57. In accordance with Water Code Section 13389, the issuance of Waste Discharge Requirements for this discharge is exempt from those provisions of CEQA contained in Chapter 3 (commencing with Section 21100), Division 13 of the California Public Resources Code.

58. 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 discharges regulated under this Order are 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”, as defined in Section VIII.B.1.a., and “New Development”, as defined in Section VIII.B.1.b.

59. The Regional Board has notified the Permittees and interested parties of its intent to issue Waste Discharge Requirements for Urban Runoff and has provided them with an opportunity to submit their written views and recommendations.

60. The Regional Board, in a public hearing, heard and considered all comments pertaining to the discharge of Urban Runoff and to the tentative 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, Moreno Valley, Murrieta, Norco, Perris, Riverside, and San Jacinto, 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, shall comply with the following:

I. 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 management programs, monitoring and reporting programs, and related plans as required by this Order.

c. Conduct chemical and biological water quality monitoring and hydrographic monitoring as required by the Executive Officer.

d. Conduct inspections and maintain the MS4s over which it has jurisdiction.

e. 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 MS4s for which it has jurisdiction and to take those actions required of it by this Order and the Federal Storm Water Regulations (see Section V "Legal Authority/Enforcement", below);

f. To cause appropriate enforcement actions against illegal discharges to the MS4 for which it has jurisdiction be taken and pursued as necessary to ensure compliance with storm water management programs, implementation plans, and regulations and policies, including physical elimination of undocumented connections and illegal discharges (see Section V - "Legal Authority/Enforcement", below);

g. Respond or cause the appropriate entity or agency to respond to emergency situations such as accidental spills, leaks, and illegal discharges/illicit connections to prevent or reduce the discharge of pollutants to its MS4s and to the Waters of the U. S.

h. Prepare, coordinate the preparation of, and submit to the Executive Officer, those reports and programs necessary to comply with this Order.

2. The activities of the Principal Permittee should also include, but not be limited to, the following:

a. Establish a Management Steering Committee (the "Management Steering Committee") as described in the ROWD 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 meet at least quarterly or more frequently as determined by the chairperson.

b. Coordinate and conduct Technical Committee (the "Technical Committee") meetings, at least ten times per year. The Technical Committee shall direct the development of the DAMP, and coordinate the implementation of the overall Urban Runoff program, as described in the ROWD. The Technical Committee will consist of one or more representatives from each Permittee.

c. Will take the lead role in initiating and developing area-wide programs and activities necessary to comply with this Order.

d. Coordinate activities and participate in committees/subcommittees formed to comply with this Order.

e. Coordinate with the Regional Board and Co-Permittees the implementation of this Order, including the submittal of all reports, plans, and programs as required under this Order.

f. 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.

g. Coordinate with the Co-Permittees the implementation of Urban Runoff quality management programs, monitoring and reporting programs, implementation plans, public education, other pollution prevention measures, household hazardous waste collection, and all BMPs outlined in the DAMP and take other actions as may be necessary to meet the MEP.

h. 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.

i. Compile information provided by the Co-Permittees and determine their effectiveness in attaining Receiving Water quality standards. This determination shall 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. A pollutant source investigation and control plan shall be performed when elevated pollutant levels are identified.

j. Solicit and coordinate public input for major changes to the Urban Runoff management programs and the implementation thereof.

k. Coordinate the development and implementation of procedures, and performance standards, to assist in the consistent implementation of BMPs, as well as Urban Runoff management programs, among the Co-Permittees.

l. Participate in watershed management programs and regional and/or statewide monitoring and reporting programs.

B. Responsibilities of the Co-Permittees:

1. Each Co-Permittee shall be responsible for managing the Urban Runoff program within its jurisdiction and shall:

a. Continue to maintain adequate legal authority to control the contribution of pollutants to their MS4s and enforce those authorities.

b. Conduct inspections of and maintain its MS4s in accordance with the criteria developed pursuant to Section XI.D, below.

c. Continue to implement management programs, monitoring and reporting programs, all BMPs listed in the DAMP, and related plans as required by this Order and take such other actions as may be necessary to meet 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 among their internal departments and agencies, as appropriate, to facilitate the implementation of this Order and the DAMP.

f. 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.

g. Respond to or arrange for the appropriate entity or agency to respond to emergency situations such as accidental spills, leaks, illegal discharges/illicit connections, etc. to prevent or reduce the discharge of pollutants to their MS4s and the Waters of the U.S.

2. The Co-Permittees' activities should include, but not be limited to, the following:

a. Participate in the Management Steering Committee and the Technical Committee in accordance with Section XIII.D. of this Order.

b. Conduct and coordinate with the Principal Permittee surveys and monitoring needed to identify pollutant sources and drainage area characteristics.

c. Prepare and submit reports to the Principal Permittee and/or the Regional Board in a timely manner.

d. Review, comment, approve, and implement plans, strategies, management programs, monitoring and reporting programs, as developed 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.

f. Submit up-to-date MS4 maps to the Principal Permittee. If necessary, these maps should be revised on an annual basis and the revised maps should be submitted to the Principal Permittee with the information required for preparation of the Annual Report.

g. Prepare and submit to the Principal Permittee in a timely manner specific reports/information, related to the Co-Permittees' Urban Runoff program, necessary to develop an Annual Report for submittal to the Executive Officer.

II. DISCHARGE LIMITATIONS/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 continue to prohibit illicit connections and illegal discharges (non-storm water) from entering their respective MS4s.

B. The discharge of Urban Runoff from each Permitee's MS4s to the Waters of the U. S. containing pollutants that have not been reduced to the MEP is prohibited.

C. The Permittees shall continue to effectively prohibit the discharge of non-storm water, including those from public agency activities, into their respective MS4s and to the Waters of the U. S. unless such discharge is authorized by a separate NPDES permit or specifically allowed by the following provisions. The Permittees need not prohibit the discharges identified below. If, however, any of the following discharges are identified by either a Permittee or the Executive Officer as a significant source of pollutants, coverage under an NPDES permit or waste discharge requirements may be required.

1. Discharges covered by a NPDES permit, Waste Discharge Requirements, or waivers issued by the Regional or State Board. Unless a Permittee is the discharger, the Permittees shall not be responsible for any exceedances of Receiving Water Limitations associated with such discharges;

2. Discharges from potable water line flushing and other potable water sources;

3. Emergency water flows (i.e., flows necessary for the protection of life and property) do not require BMPs and need not be prohibited. However, appropriate BMPs shall be considered where practicable when not interfering with emergency public health and safety issues;

4. Discharges from landscape irrigation, lawn/garden watering and other irrigation waters;

5. Air conditioning condensate;

6. Diverted stream flows;

7. Rising ground waters and natural springs;

8. Groundwater infiltration (as defined in 40 CFR 35.2005(20)) and "uncontaminated pumped groundwater" (as defined in Appendix 4, Glossary);

9. Passive foundation drains;

10. Passive footing drains;

11. Water from crawl space pumps;

12. Non-commercial vehicle washing, (e.g. residential car washing (excluding engine degreasing) and car washing fundraisers by non-profit organization);

13. Flows from riparian habitats and wetlands;

14. Dechlorinated swimming pool discharges;

15. Waters not otherwise containing wastes as defined in Water Code Section 13050 (d); and

16. Other types of discharges identified and recommended by the Permittees and approved by the Regional Board.

D. The Regional Board may issue Waste Discharge Requirements for discharges exempted from NPDES requirements, such as agricultural irrigation waters, if identified to be a significant source of pollutants.

E. The Regional Board may add categories of non-Urban Runoff discharges that are not significant sources of pollutants or remove categories of non-Urban Runoff discharges listed in Section II.C. above, based upon a finding that the discharges are a significant source of pollutants.

F. When types of discharges listed in Subsections II.C.2-16, above, are identified as a significant source of pollutants to the Waters of the U.S., a Permittee shall either: prohibit the discharge category from entering its MS4 or ensure that “structural” and “source control BMPs” (as defined in Appendix 4, Glossary) are implemented to reduce or eliminate pollutants resulting from the discharge. The Permittees shall evaluate the permitted discharges, as listed in Subsection II.C.1., above, to their MS4s to determine if any are a significant source of pollutants to their MS4s and notify the Executive Officer if any are a significant source of pollutants to their MS4s.

G. The Permittees shall continue to reduce the discharge of pollutants, including trash and debris, from their respective MS4s to Receiving Waters to the MEP.

H. Discharges from the MS4s shall be in compliance with the discharge prohibitions contained in Chapter 5 of the Basin Plan.

I. Discharge of Urban Runoff from a Permittee’s MS4 shall not cause or contribute to a condition of nuisance as the term is defined in Section 13050 of the Water Code.

III. RECEIVING WATER LIMITATIONS

A. Urban Runoff discharges from the Permittees’ MS4s shall not cause or contribute to exceedances of Receiving Water quality standards (as defined by “beneficial uses” and

"water quality objectives" in the Basin Plan and amendments thereto) for surface waters or ground waters.

B. The DAMP and its components shall be designed to achieve compliance with Receiving Water Limitations associated with discharges of Urban Runoff. 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 Sections II and III 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 exceedance(s) of water quality standards due to Urban Runoff discharges persist, notwithstanding implementation of the DAMP and other requirements of this Order, the Permittees shall assure compliance with Sections II.B and III 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 systems are causing or contributing to an exceedance of an applicable Water Quality Standard, the Permittees shall within two (2) working days, provide oral or e-mail notice to Regional Board staff of the location within its jurisdiction where the exceedance occurred and describe the nature of the exceedance. Following oral or e-mail notification, a written report must be submitted to the Executive Officer within thirty (30) calendar days of becoming aware of the situation. The report submitted for review and approval shall, at a minimum, describe 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 water quality standards. Alternatively, if the exceedances are due to discharges to the MS4 from activities or areas not under the jurisdiction of the Permittees, the Permittees shall provide documentation of these discharges in the subject report, consistent with Subsection D.6., below.

2. Determination of the effect of Urban Runoff discharges from the MS4s on Receiving Water quality standards shall include a comparative analysis of the Permittees' monitoring data to the applicable water quality objectives for the Receiving Waters specified in Chapter 4 of the Basin Plan.

3. The Executive Officer may by written notice require modifications to the report, required by Subsection D.1., above. If required, such modifications shall be submitted within thirty (30) calendar days of receipt of said written notice.

4. Within ninety (90) calendar days following approval by the Executive Officer of the report required by Subsection D.1., above, the Permittees shall revise the DAMP and their monitoring and reporting programs to incorporate the approved modified or additional BMPs that have been or are to be implemented, and the implementation schedule.

5. The revised DAMP and monitoring program are to be implemented in accordance with the approved schedule.

6. If the exceedances are solely due to discharges to the MS4 that are outside the Permittees jurisdiction or control, the Permittees shall, within two (2) working days of becoming aware of the situation, provide oral or e-mail notice to Regional Board staff 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.

7. 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 BMP's and provides written notice to the Permittees of this determination.

IV. IMPLEMENTATION AGREEMENT

A. Within six (6) months of this Order's adoption, the existing Implementation Agreement shall be revised to include the city of Murrieta. A copy of the signature page and revisions to the Agreement shall be included in the Annual Report.

B. No later than November 30th of each year, the Permittees shall evaluate their Urban Runoff management programs and the Implementation Agreement and determine the need, if any, for revision. The Annual Report shall include the findings of this review and a schedule for any necessary revision(s).

V. LEGAL AUTHORITY/ENFORCEMENT:

A. The Permittees shall continue to maintain and enforce adequate legal authority to control the contribution of pollutants to the MS4s and enforce those authorities.

B. The Permittees shall continue to take appropriate enforcement actions against violators of their Storm Water Ordinances, in accordance with the Federal Storm Water Regulations (40CFR, Part 122.26(d)(2)(I)(A-F)), and adopted/established guidelines and procedures in the E/CS.

C. Within six (6) months of this Order's adoption, the Permittees shall evaluate their ordinances, regulations, rules and codes to determine if it has provided its staff authority to impose administrative fines for violations of its Storm Water Ordinance.

D. Co-Permittees' ordinances or other local regulatory procedures shall include sanctions to ensure compliance. Sanctions shall include but shall not be limited to: verbal and/or written warnings, notice of violation or non-compliance, obtaining an administrative compliance, stop work or cease and desist order, a civil citation or injunction, the imposition of monetary penalties or criminal prosecution (infraction or misdemeanor). If

the Co-Permittee's current ordinances or codes do not provide for the imposition of these civil or criminal penalties for violations of its Storm Water Ordinances, the Co-Permittee shall enact such ordinances within eighteen (18) months of this Order's adoption.

E. The Permittees shall continue to provide notification to Regional Board staff regarding Urban Runoff related information gathered during site inspections of construction, and industrial sites regulated by the General Storm Water Permits or San Jacinto Watershed Construction Activities Permit and at sites that should be regulated under these Permits. The notification should include observed violations of these permits, prior history of violations, enforcement actions taken by the Permittee, and other relevant information. In addition, Sections IX, X, and XII of this Order address additional notification requirements for construction, industrial and commercial sites not covered under the General Storm Water Permits.

F. Within twelve (12) months of this Order's adoption, and annually thereafter in November, the Permittees shall provide a report containing a review of their Storm Water Ordinances and their ordinance enforcement practices to assess their effectiveness in prohibiting non-exempt, non-storm water 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). At a minimum, the following types of non-exempt, non-storm water discharges and wastes shall be considered:

1. Sewage, where a Co-Permittee operates a POTW and associated sewage collection system;

2. Wash water resulting from the hosing or cleaning of gas stations, and other types of automobile service stations;

3. Discharges resulting from the cleaning, repair, or maintenance of equipment, machinery, or facilities, including motor vehicles, concrete mixing equipment, portable toilet servicing, etc.;

4. Wash water from mobile auto detailing and washing, steam and pressure cleaning, carpet cleaning, etc.;

5. Water from cleaning of municipal, industrial, and commercial areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, containing chemicals or detergents, and without prior sweeping, etc;

6. Runoff from material storage areas or uncovered receptacles that contain chemicals, fuels, grease, oil, or other hazardous materials;

7. Discharges of runoff from the washing of toxic materials from paved or unpaved areas;

8. Discharges from pool or fountain water containing chlorine, biocides, or other chemicals; pool filter backwash containing debris and chlorine;

9. Pet waste, yard waste, debris, sediment, etc;

10. Restaurant or food processing facility wastes such as grease, floor mat and trash bin wash water, food waste;

G. Within eighteen (18) months of this Order's adoption, each Permittee shall submit a statement (signed by its 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.

VI. ILLICIT CONNECTIONS/ILLEGAL DISCHARGES; LITTER, DEBRIS AND TRASH CONTROL

A. The Co-Permittees shall continue to prohibit illicit connections and illegal discharges to the MS4s through their Storm Water Ordinances and the Principal Permittee shall do so through its statutory authority. In addition, the Permitees shall continue to implement and improve routine inspection and monitoring and reporting programs for their MS4s. If routine inspections or dry weather monitoring indicate illicit connections or illegal discharges, they shall be investigated and eliminated or permitted within sixty (60) calendar days of receipt of notice by its staff or from a third party. A summary of these actions shall be submitted annually beginning with the 2003-2004 Annual Report.

B. The Permittees upon being put on notice by staff or a third party shall immediately upon becoming aware of the circumstances (within 24 hours of receipt of notice by its staff or from a third party) investigate all spills, leaks, and/or illegal discharges to the MS4s. Based upon their assessment and as specified below, the Permittees shall report as follows:

1. All discharges that endanger human health or the environment:

a. By phone to the Office of Emergency Services (the "OES") at (800-852-7550) and to the Executive Officer at (909-782-3238). Alternatively, the report to the Executive Officer may be done by e-mail at (sw@rb8.swrcb.ca.gov).

b. At a minimum, any sewage spill above 1,000 gallons or that could impact water contact recreation, any oil spill that could impact wildlife, any hazardous material spill where residents are evacuated, any spill of reportable quantities of hazardous waste (as defined in 40CFR 117 and 40 CFR 302), or any other spill or discharge that is reportable to the OES (collectively, an "Emergency Situation") shall be reported within twenty-four (24) hours of becoming aware of the circumstances.

2. Other spill incidents, including any unauthorized discharge, that are not incidents reportable to the OES shall be reported to the Executive Officer within two (2) business days of becoming aware of the circumstances.

3. A written report of the discharge or incident described in this subsection shall be submitted to the Executive Officer within ten (10) calendar days of becoming aware of the circumstances.

4. The Permittees may propose a reporting program, including reportable incidents and quantities, jointly with other agencies such as the County Health Department for approval by the Executive Officer.

C. The Permittees shall continue to implement control measures to reduce and/or to eliminate the discharge of pollutants, including trash and debris, from MS4s to the Receiving Water. These control measures shall be reported in the Annual Report.

D. Within eighteen (18) months of this Order's adoption, the Technical Committee shall provide a written assessment of the relative efficiency and cost effectiveness of the available BMPs and the BMPs currently implemented for the control of anthropogenic litter (e.g. street sweeping, catch basin cleaning, deployment of trash receptacles, public education, etc.) and develop recommendations for improving the effectiveness of the currently implemented measures, and implement appropriate BMPs to control trash in Urban Runoff. The Permittees are required to establish a system to record visual observation information regarding the materials collected from the MS4 (e.g. paper, plastic, wood, glass, vegetative litter, and other similar debris), descriptions of its main source(s) (e.g. office, residential, commercial, and industrial waste), and problem areas. The findings of this review, along with supporting field data, shall be included in the Annual Report for 2004-2005.

E. Within eighteen (18) months of this Order's adoption, the Permittees shall review their litter/trash control ordinances to determine the need for revision to improve the effectiveness of these ordinances. The findings of this review shall be included in the Annual Report for 2003-2004.

VII. SEWAGE SPILLS, INFILTRATION INTO MS4 SYSTEMS FROM LEAKING SANITARY SEWER LINES, SEPTIC SYSTEM FAILURES, AND PORTABLE TOILET DISCHARGES

A. The Executive Officer will request the local sewering agencies to take the lead and develop unified response guidance, in cooperation with the Principal Permittee. The Principal Permittee shall collaborate with the local sewering agencies to develop a unified response procedure to respond to sewage spills that may have an impact on Receiving Water quality. The Permittees shall provide local sanitation districts 24-hour access to the MS4s to address sewage spills. The Permittees shall continue to work cooperatively with the local sewering agencies to determine and control the impact of infiltration from leaking sanitary sewer systems on Urban Runoff quality.

B. Within twelve (12) months of this Order's adoption, the Permittees, whose jurisdictions have 50 or more septic tank sub-surface disposal systems in use, shall identify with the appropriate governing agency a procedure to control septic system failures to prevent impacts on Urban Runoff quality and continue to follow procedures established by the State Health Department to address such failures.

C. Within twelve (12) months of this Order's adoption, the Principal Permittee shall review the Permittees' current oversight programs for portable toilets to determine the need for revisions.

VIII. NEW DEVELOPMENT (INCLUDING SIGNIFICANT REDEVELOPMENT)

A. GENERAL REQUIREMENTS:

1. Each Co-Permittee shall, consistent with the DAMP and its Storm Water Ordinance, and any revisions thereto as required by this Order, when considering any map or permit for which discretionary approval is sought require that said map or permit contain a condition requiring the applicant to obtain coverage under the General Construction Activity Storm Water Permit or the San Jacinto Watershed Construction Activities Permit, if applicable (collectively the "Construction Activity Permits"), by filing a Notice of Intent ("NOI") with either the State or Regional Board, as applicable. Verification that said condition has been satisfied may be established, as to the General Construction Activity Storm Water Permit, by presentation of a letter from the State Board indicating that the required fees have been paid and a waste discharge identification number ("WDID No.") has been issued or determining from the State Board's web-site that the WDID No. has been issued, and, as to the San Jacinto Watershed Construction Activities Permit, that the required Storm Water Pollution Prevention Plan ("SWPPP") has been approved, fees have been paid and the Regional Board has issued a WDID No. Within six (6) months of this Order's adoption, each Co-Permittee shall review and revise as needed its land use approval process to include a procedure to ensure that coverage has been secured under the appropriate Construction Activity Permit for each map or permit that it has approved.

2. Each Co-Permittee shall continue to implement those BMPs identified in the "New Development Guidelines", and the attachment thereto entitled "Selection and Design of Storm Water Quality Controls," that constitute Supplement A ("Supplement A") to the DAMP in its review of any map or permit for which discretionary approval is sought. The land use approval process of each Co-Permitee shall continue to require source control and address the need for structural treatment BMP's, identify their location, and identify how long-term maintenance responsibilities are to be met.

3. The Permittees shall review and revise, as necessary, the DAMP, including Supplement A, in order to effect the implementation of new or enhanced BMPs that more effectively reduce pollutants in runoff from construction sites during all phases of construction, including post-construction. At a minimum, the DAMP shall continue to:

a. Discuss possible amendments to the Co-Permittees' ordinances, regulations, and codes that would enhance grading and erosion control and public education,

b. Propose review criteria to be applied in land use review processes to better address issues regarding Urban Runoff; and

c. Identify BMPs or regional or sub-regional Urban Runoff treatment/infiltration BMPs that would enhance pollution prevention measures and address post construction Urban Runoff issues.

4. The Permittees shall review and revise, as necessary, the DAMP, including Supplement A, in order to develop and effect the implementation of new or enhanced BMPs that reduce pollutants in Urban Runoff from commercial and industrial sites both during and after site construction. Appropriate BMPs will be required for industrial/commercial land uses that are identified during the land use approval process. For industrial/commercial land uses that are identified subsequent to the issuance of a discretionary map or permit, appropriate BMPs will be addressed through the E/CS. At a minimum the DAMP shall continue to address:

   a. The identification of those characteristics of the development of a commercial or industrial site that are likely to be a source of pollutants in Urban Runoff that should be addressed and considered during the land use approval process, and

   b. The identification of regional or sub-regional Urban Runoff treatment/infiltration BMPs that would address post construction Urban Runoff issues.

5. Each Co-Permittee shall continue to reduce the short and long-term impacts on Receiving Water quality from New Developments, as defined in Subsection B.1, below, and Significant Redevelopment, as defined in Subsection B.1., below, as required in Subsection B., below. In order to reduce pollutants and runoff flows from New Development and Significant Redevelopment to the MEP, the Co-Permittees shall at a minimum:

   a. Review their respective land use approval and CEQA review processes to insure that each addresses Urban Runoff issues consistent with provisions of this Order and make appropriate revisions to each, and

   b. Develop and implement a public/business education program as specified in Section IX.C.4., below.

6. Each Co-Permittee shall provide the Regional Board with any draft general plan or any draft general plan amendments for comment in accordance with Government Code Section 65350 et. seq.

7. Each Co-Permittee shall, through its conditions of approval, continue to address the maintenance and operation of structural BMPs required to be constructed to ensure Urban Runoff quality from New Development. The parties responsible for the maintenance and operation of such structural BMPs and an appropriate funding mechanism shall be identified in said conditions of approval.

8. Within twelve (12) months of this Order's adoption, the Co-Permittees shall review their respective land use approval and CEQA processes to ensure that Urban Runoff issues are properly considered and addressed. If necessary, these processes should be revised to consider and mitigate impacts to Urban Runoff quality. These changes may include amending the general plan, modifying the land use approval process or the environmental assessment form, which may include adding a section on Urban Runoff quality issues. The findings of this review and the actions taken by the Co-Permittees shall be reported to the Regional Board in the Annual Report for the corresponding year in which the review is completed. The following shall be considered in a Co-Permittee's environmental assessment form:

    a. Potential impact that construction of the project may have on Urban Runoff.

    b. Potential impact that operation of the project may have on Urban Runoff.

    c. Potential for discharge of pollutants in Urban Runoff from areas identified within the project site to be used for 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 work areas.

    d. Potential for pollutants in Urban Runoff discharged from a project site that may affect the beneficial uses of the Receiving Waters.

    e. Potential for significant changes in the flow velocity or volume of Urban Runoff from a project site that would result in environmental harm.

    f. Potential for significant increases in erosion of a project site or surrounding areas.

9. Within twenty-six (26) months of this Order's adoption, each Co-Permittee shall review its general plan and related land use ordinances and land use approval process (including, but not limited to, its approved development standards, zoning ordinances, standard conditions of approval, or project development guidelines) to ensure that the principles and policies enumerated below are properly considered and are incorporated into the land use approval process. The findings of this review and the actions taken by each Co-Permittee shall be reported to the Regional Board in the Annual Report for the year in which the review is completed. Said principles and policies should include, but not be limited to, the following:

a. Limit disturbance of natural water bodies and drainage systems; conserve natural areas; protect slopes and channels; minimize 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 source control and structural BMPs[8] to mitigate the projected increases in pollutant loads and flows; ensure that post-construction runoff rates and velocities from a site do not result in significant adverse impact on downstream erosion and stream habitat; limit the quantity of Urban Runoff directed to impermeable surfaces and the MS4s; 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; establish reasonable limits on the clearing of vegetation from the project site;

d. Encourage the use of BMPs to manage Urban Runoff quality and quantity;

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.

10. Within sixteen (16) months of this Order's adoption, each Co-Permittee shall review and, as necessary, revise its grading/erosion control ordinances in order to reduce erosion caused by New Development or Significant Redevelopment.

11. Within eighteen (18) months of this Order's adoption, the Permittees shall identify a listing of erosion control BMPs appropriate for use during site construction in the Permit Area. The proposed and final BMP listing shall be approved, in writing, by the Executive Officer.

12. The Co-Permittees shall continue to implement the BMPs described in Supplement A and the "Municipal Facilities Strategy" dated 1997, prepared for and approved by the Permittees.

[8] In lieu of site specific structural BMPs, a regional treatment system that provides equivalent or superior treatment of Urban Runoff is acceptable.

B. WATER QUALITY MANAGEMENT PLAN FOR URBAN RUNOFF (FOR NEW DEVELOPMENT/SIGNIFICANT REDEVELOPMENT)

Within twenty (20) months of this Order's adoption, the Permittees shall develop a Water Quality Management Plan (the "WQMP") identifying BMPs, including design standards for source control and structural BMPs[9], that are to be applied when considering any map or permit for which discretionary approval is sought. The WQMP is intended to address regional and sub-regional source control and structural BMPs and to provide guidelines for site specific, "post-construction BMPs" (as defined in Appendix 4, Glossary) to address management of Urban Runoff quantity and quality. The WQMP is to be submitted to the Executive Officer for his review and approval, consistent with the criteria identified in Subsections B.1., 2., and 3., below:

1. The WQMP shall address management of Urban Runoff quality from a project site, represented by a map or permit for which discretionary approval is sought from a Co-Permittee, in one of the categories of development identified below:

   a. "Significant Redevelopment" is defined as the addition or creation of 5,000, or more, square feet of impervious surface on an existing developed site. This includes, but is not limited to, construction of additional buildings and/or structures, extension of the existing footprint of a building, construction of impervious or compacted soil parking lots. Where Significant Redevelopment results in an increase of less than fifty percent of the existing impervious surfaces of an existing developed site, and the existing developed site received its discretionary land use approvals prior to the adoption of the WQMP, the WQMP would apply only to the addition, and not the existing development. Significant Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, the original purpose of the constructed facility or emergency actions required to protect public health and safety;

   b. For purposes of this Order, the categories of development identified below, shall be collectively referred to as "New Development":

      (1.) Residential development of 10 dwelling units, or more, including single family and multi-family dwelling units, condominiums, or apartments.
      (2.) Industrial and commercial development where the land area represented by the proposed map or permit is 100,000 square feet, or more, including, but not limited to, non-residential developments such as hospitals, educational institutions, recreational facilities, mini-malls, hotels, office buildings, warehouses, light industrial, and heavy industrial facilities;
      (3.) Automotive repair shops (with standard industrial classification ("SIC") codes 5013, 7532, 7533, 7534, 7537, 7538, and 7539).
      (4.) Restaurants (SIC Code 5812) where the project site is 5,000 square feet, or more.

(5.) Hillside development that creates 10,000 square feet, or more, of impervious surface(s), including developments located on areas with known erosive soil conditions or where the natural slope is twenty-five percent or more.
(6.) Developments creating 2,500 square feet, or more, of impervious surface that is adjacent to (within 200 feet) or discharging directly into areas designated in the Basin Plan as waters supporting habitats necessary for the survival and successful maintenance of plant or animal species designated under state or federal law as rare, threatened, or endangered species (defined in the Basin Plan as "RARE") or waterbodies listed on the CWA Section 303(d) list of Impaired Waterbodies within the Permit Area.
(7.) Parking lots of 5,000 square feet or more of impervious surface exposed to storm water. Parking lot is defined as a site or facility for the temporary storage of motor vehicles.

2. The primary objective of the WQMP, by addressing source control and structural BMPs[9], 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 project sites for a map or permit for which discretionary approval is given. This objective may be achieved through source control and structural BMPs. In developing the WQMP, the Permittees are to consider and address the following:

a. Pollutants of Concern/Conditions of Concern. The WQMP is to include a protocol by which Pollutants of Concern and/or Conditions of Concern are identified and their potential impact on Urban Runoff from a project site that is to be developed by one or more of the categories specified in Section VIII.B.1., above. The protocol shall include, at a minimum, consideration of the following:

(1) The quality of the Receiving Waters in proximity to the project site (including pollutants for which a waterbody within the Permit Area that has been listed as impaired under CWA Section 303(d));
(2) The category of development and the type of pollutants associated with that development category;
(3) Pollutants expected to be present on the project site; and
(4) Sensitivity of the Receiving Waters in proximity to the project site to changes in storm water discharge flow rates, velocities, durations, and volumes.

b. Implementation Process. The WQMP shall specify at which point in the land use approval process the provisions of the WQMP should be considered. The WQMP shall generally describe the type of municipal departments or related agencies that are best equipped to evaluate the project site and draft the conditions of approval that will identify the types of BMPs required to address the specified concerns indicated by the protocol developed consistent with Subsection B.2.a, above, and incorporated into the WQMP.

c. If the draft condition of approval identifies the need for source control or structural BMPs[9], the WQMP will require the proposed condition of approval to identify the operation and maintenance requirements for the identified structural source and/or treatment control and identify the funding source(s) and the parties responsible for the ongoing operation, maintenance, repair, rehabilitation and/or replacement of the source control and/or structural BMPs[9].

3. The WQMP shall include a list of recommended source control and structural BMPs[9] and a protocol, developed pursuant to Subsection B.2., above, that will identify those applications that would be most effective for a project site that is to be developed by one or more of the categories specified in Section VIII.B.1., above. The source control and structural BMPs included in said list shall, at a minimum:

   a. Control the post--construction peak storm water runoff discharge rates and velocities to avoid increasing downstream erosion beyond pre-construction conditions;

   b. Conserve natural areas and protect stream habitat, where feasible;

   c. Minimize the introduction of Pollutants of Concern into Urban Runoff;

   d. Remove Pollutants of Concern from Urban Runoff to the MEP;

   e. Protect slopes and channels from eroding;

   f. Require storm drain inlet stenciling and signage;

   g. Require properly designed outdoor material storage areas;

   h. Require properly designed trash storage areas; and

   i. Be located as close to pollutant sources, as appropriate and economically/ technologically feasible, and before the Urban Runoff is discharged into Receiving Waters.

4. If by January 1, 2005, the Permittees have not developed the WQMP and/or the WQMP has not been approved by the Executive Officer, then each Co-Permittee shall cause to be placed on any proposed project submitted to it after said January 1st that requires discretionary approval of a map or permit that proposes to develop a site consistent with one or more of the categories specified in Subsection B.1., above, conditions of approval that will require source control and/or structural BMPs that are to meet design standards consistent with those specified in Subsection B. 5, below.

5. Source control and structural BMPs for any proposed project submitted to a Co-Permittee that requires discretionary approval of a map or permit that proposes to develop a site consistent with one or more of the categories specified in Subsection B.1., above, are to be sized to comply with one of the following numeric sizing

criteria or be determined by the Co-Permittee to provide equivalent or superior treatment of Urban Runoff, on a site basis:

a. Volume. Volume–based BMPs shall be designed to treat urban pollutants (including, but not limited to, sediments, copper, lead, arsenic, zinc, and pesticides), or infiltrate either:

1) The volume of Urban Runoff produced from a 24-hour, 85th percentile storm event, as determined from the local historical rainfall record; or
2) The volume of annual Urban Runoff produced from a 24-hour, 85th percentile rainfall event, determined as the maximized capture Urban Runoff 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 Urban 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
4) The volume of Urban 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 Urban Runoff produced from a 24-hour, 85th percentile storm event;

Or,

b. Flow. Flow-based BMPs shall be designed to treat urban pollutants (including, but not limited to, sediments, copper, lead, arsenic, zinc, and pesticides), or infiltrate either:

1) The maximum flow rate of Urban Runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or
2) The maximum flow rate of Urban 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 Urban 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.

6. Implementation of Subsections B.1. through B.5., above shall include consideration of the following:

a. Each Co-Permittee may propose equivalent sizing criteria for structural BMPs that will achieve greater or substantially similar pollution control benefits. In the absence of approved equivalent sizing criteria, the Co-Permittee shall implement the above stated sizing criteria.

b. Waiver Provisions. A Co-Permittee may provide for a project to be waived from the requirement of implementing structural BMPs (Section VIII. B. 5). All waivers, along with documentation justifying the issuance of the waiver, must be submitted to Regional Board staff in writing within thirty (30) calendar days. If the Executive Officer determines that waivers are being inappropriately granted, this Order may be reopened to modify these waiver conditions:

(1). If infeasibility can be established. A waiver of infeasibility shall only be granted by a Co-Permittee when all available structural BMPs have been considered and rejected as technically infeasible and/or the cost of implementing the structural treatment BMP greatly outweighs the pollution control benefit.

(2.) For those portions of the Permit Area that will not result in a discharge to the Receiving Waters under the rainfall conditions specified in Subsections B.5., above.

c. If a particular BMP is not technically feasible, other BMPs should be implemented to achieve the same level of pollution control or if the cost of implementing a technically feasible BMP greatly outweighs the pollution control benefits, the Co-Permittees may grant a waiver of the numeric sizing criteria for said BMP as set forth in the WQMP.

d. The Principal Permittee and the Co-Permittees, individually or jointly, as appropriate, may develop and implement regional and sub-regional watershed management BMPs that address Urban Runoff from New Development and Significant Redevelopment.

e. The obligation to install structural BMPs for New Development will be satisfied if, for a specific plan, multiple subdivisions, or a regional area, structural BMPs are constructed with the requisite capacity to serve the specific plan, multiple subdivisions, or regional area, even if certain phases of the specific plan or the subdivision do not have structural treatment BMP located within the boundaries of the particular phase, provided, however, the structural BMPs are designed and implemented to intercept Urban Runoff prior to it reaching the Receiving Waters and said BMPs meet the sizing criteria set forth in the WQMP or as specified in Subsection B.5, above.

7. Structural BMPs utilizing infiltration shall comply with the following:

a. Infiltration shall not cause or contribute to an exceedance of groundwater quality objectives.

b. Protect groundwater quality.

c. Should not be used in high vehicular traffic areas (25,000 or greater average vehicles daily) unless necessary to mitigate peak storm flows for the protection of real and personal property, or for the protection of public health and safety. A sampling and analysis plan shall be implemented for such sites.

d. Shall be located at least 500 feet horizontally from water supply wells.

e. Shall not cause a nuisance, including odor, vectors or pollution as defined by Water Code Section 13050.

IX. MUNICIPAL INSPECTION PROGRAM

The municipal inspection program is outlined in the E/CS, prepared by the Permittees. The E/CS describes 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. The E/CS comprises a framework to standardize the implementation and enforcement by the Co-Permittees of their respective Storm Water Ordinances. As part of the E/CS, the Principal Permittee and the County have implemented the CAP that, through the Riverside County Environmental Health Department, specifically addresses storm water compliance survey/inspections of each facility that must secure a hazardous materials permit for either storing, handling or generating hazardous materials and restaurants. The Co-Permittees shall continue to enforce their respective Storm Water Ordinances consistent with the E/CS and shall revise the E/CS, within twelve (12) months of the adoption of this Order, and their respective Storm Water Ordinances consistent with the program elements described below. The revision of the E/CS is to be submitted for approval, in writing, by the Executive Officer.

A. Construction Sites

1. Each Co-Permittee shall develop within twelve (12) months of this Order's adoption, an inventory of active construction sites within its jurisdiction for projects for which a building or grading permit has been issued for a site that is 1-acre or larger. As written in the "Storm Water Phase II Final Rule – Small Construction Program Overview" (EPA 833-f-00-013, January 2000, Fact Sheet 3.0), smaller parcels that are part of a larger development will also be required to comply with the Phase II rules. A construction site will be included in the inventory regardless of whether the construction site is subject to the Construction Activity Permits, or other individual construction storm water NPDES permits. In addition, beginning thirteen months (13) from the adoption date of this Order, New Development/Redevelopment Sites meeting the criteria defined in Section VIII. B.1, shall also be included in this database. This inventory shall be routinely maintained to reflect additional construction sites as permits are issued and may reflect deletions as occupancy permits are issued or a construction site is abandoned. This inventory shall be maintained in a computer database system. An electronic copy or update of the database, in a format acceptable to the Executive Officer, shall be provided with each Annual

Report or upon request. The database specifics shall at a minimum include the relevant site information as outlined in the E/CS. The revised E/CS should provide for the inclusion of the following information: facility name (dba), address, city, zip code, mailing address (if different), location reference (such as GIS coordinates, cross streets, etc.) facility contact and phone number, site size, Map/Plot Plan No., Grading Permit No., Assessor's Parcel Number ("APN"), and State WDID No. Linking the database to a Geographical Information System ("GIS") is recommended but is not required.

2. Within twelve (12) months of this Order's adoption, the Co-Permittees shall inspect all inventoried construction sites, document relevant site information as outlined in the E/CS, and shall cause said information to be entered into the inventory database. In establishing priorities for inspection of construction sites consistent with this Order, the Co-Permittees shall prioritize construction sites within their jurisdiction as a high, medium, or low threat to Receiving Water quality (consistent with the criteria contained in Section IX.A.3., below). Evaluation of construction sites should be based on such factors as soil erosion potential, project size, proximity and sensitivity of Receiving Waters, history of compliance, and other relevant factors. The priority level assigned to a construction site may change during the construction period, however, at a minimum, the following construction sites shall be given a high priority in the initial inventory:

   a. Sites that disturb an area greater than 50 acres;

   b. Sites that disturb an area greater than one (1) acre and are located adjacent to, within 200 feet, of an identified impaired water body within the Permit Area; and,

   c. Sites that disturb an area greater than one (1) acre and directly discharge to an identified Impaired Waterbody within the Permit Area.

3. Each Co-Permittee shall conduct construction site inspections for compliance with its ordinances, including its Storm Water Ordinance, regulations, codes, and the WQMP, when approved. Construction site inspections shall at a minimum address the following areas as outlined in the E/CS:

   a. Check for submittal of a NOIs in compliance with the Construction Activity Permits, if required;

   b. Confirm a SWPPP, if required, is on-site;

   c. Confirm compliance with the Co-Permittee's Storm Water Ordinance;

   d. Check for active non-stormwater discharges or potential illicit connections or illegal discharges to a MS4; and,

e. The frequency of inspections shall be as follows:

Site Priority Level	Inspection Frequency
High	Once every two weeks
Medium	Once each month
Low	Once during the wet season
Follow-up inspections when Storm Water Ordinance violations are observed	As specified in the E/CS, at least within two weeks, or consistent with a compliance schedule.

4. Each Co-Permittee shall enforce its Storm Water Ordinance at construction sites as necessary to maintain compliance with the E/CS and this Order. Sanctions for non-compliance may include: verbal and/or written warnings, notice of violation or non-compliance, obtaining an administrative compliance, stop work or cease and desist order, a civil citation or injunction, the imposition of monetary penalties or criminal prosecution (infraction or misdemeanor).

5. As described in the E/CS, the Co-Permittees will provide training to staff involved in inspecting construction sites. Staff training will address the requirements of the following:

   a. The Storm Water Ordinances, resolutions, and codes;

   b. This Order, the approved WQMP, and the DAMP;

   c. The Construction Activity Permits;

   d. The E/CS.

6. Construction site inspectors will also receive training regarding SWPPPs, selection and maintenance of appropriate BMPs for construction sites, including erosion and sediment control. Each Co-Permittee shall have arranged for adequate training of its current inspection staff within twelve (12) months of this Order's adoption and on an annual basis thereafter, prior to the start of the "Rainy Season" (October 1 through May 31st). Training programs should be coordinated with Regional Board staff and prior notification of formal classroom training activities shall be provided to Regional Board staff. New hires or transfers that will be performing construction site inspections for a Co-Permittee shall be trained within six (6) months of starting inspection duties.

7. Within twenty-four (24) hours of receipt of notice by its staff or from a third party, each Co-Permittee shall continue to provide oral or e-mail notification to Regional Board staff of sites within its jurisdiction that are determined to be an Emergency Situation. Following oral or e-mail notification, a written report must be submitted to Regional Board Staff within ten (10) calendar days of receipt of notice of the Emergency Situation, detailing the nature thereof, corrective actions taken by the site owner, other relevant information (e.g., past history of

non-compliance, environmental damage resulting from the Emergency Situation, site owner responsiveness) and the type of enforcement, consistent with Table 4 of the E/CS, that has been or will be carried out by the Co-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 will be included in the database identified in Subsection A.1, above.

8. 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 Construction Activity Permits or other order or permit issued by the State or Regional Board, 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 describing the nature of the incident. Following oral or e-mail notification, a written report must be submitted to Regional Board staff within ten (10) calendar days of becoming aware of the situation.

9. Upon referral of a construction site to Regional Board staff for failure to obtain coverage under the applicable Construction Activity Permit, failure to keep a SWPPP at the construction site, if applicable, or an observed act or omission that suggests failure to comply with either, the Co-Permittee will take no further action at the construction site with regard to securing compliance with the Construction Activity Permits. It is understood by the Co-Permittees and Regional Board staff that this will preclude duplication of effort and insure that consistent direction is provided to the owner/developer and the construction site manager as to what is required to bring the site into compliance with the General Construction Activity Storm Water Permit or San Jacinto Watershed Construction Activities Permit. Each Co-Permittee shall take appropriate actions to bring a construction site into compliance with its local ordinances, rules, regulations, and WQMP, when approved.

10. The number of inspections and the actions taken will be documented by the Co-Permittees and an appropriate summary of said actions will be provided to the Principal Permittee for inclusion in the Annual Report submitted to the Regional Board.

11. The Permittees need not inspect construction sites already inspected by Regional Board staff if the inspection of said site, given its prioritization consistent with the E/CS, was concluded within the time frame specified for said site's prioritization. To facilitate this, Regional Board staff will post a list of facilities inspected on the website or make this information available to the Co-Permittees by other pre-arranged means.

B. Industrial Facilities

1. Each Co-Permittee shall develop within eighteen (18) months of this Order's adoption, an inventory of industrial facilities in the Permit Area within its jurisdiction that has the potential to discharge pollutants to the MS4.

a. Each Co-Permittee that presently has an existing local industrial inspection program (the cities of Corona and Riverside as to their respective POTW pre-treatment inspections and the County through the CAP) shall include in their respective inventory of industrial facilities information derived from existing compliance survey and inspection programs.

b. Each Co-Permittee without an industrial inspection program shall include in their inventory of industrial facilities information from the CAP that is relevant to its jurisdiction and may include information derived from other agencies providing services within its jurisdiction, including, but not limited to, the appropriate Fire Department, health departments, and POTW servicing the Permit Area.

c. An industrial facility will be included in said inventory, regardless of whether the facility is subject to the General Industrial Activities Storm Water Permit, or other individual NPDES permits issued by the State or Regional Boards.

d. The inventory shall be routinely updated, information can be derived from any of the following sources: conditional use permits, plot plans, building permits, business licenses, occupancy permits, hazardous materials permits, and hazardous waste generator permits are approved for the development of a new industrial facility, additional facilities are identified through the CAP, and as compliance surveys and inspections are completed and industrial facilities are identified. This inventory shall be maintained in a computer database system.

e. The Co-Permittees 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 Activities Storm Water Permit and that it may have to secure coverage thereunder.

f. The database information content may be Co-Permittee specific and shall be developed and maintained in accordance with the E/CS. The database contents shall at a minimum include the relevant site information, outlined in the E/CS. The revised E/CS should provide for the inclusion of the following information: facility name (dba), address, city, zip code, mailing address (if different), location reference (such as, GIS coordinates, cross streets, etc.) facility contact and phone number, SIC Code(s), State WDID No.(if any), APN, and site size. An electronic copy or update of the database, in a format acceptable to the Executive Officer, shall be provided with each Annual Report or upon request. Linking the database to a GIS is recommended but is not required.

2. The frequency and priority of an industrial facility compliance survey or inspection will be based on the most recent facility visit as outlined in the E/CS, as revised, consistent with this Order. The revised E/CS 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, frequency of existing inspections, based upon other California statutes or regulations, or local regulations, ordinances, or codes, and any other relevant factors. At a minimum, a high priority classification shall be assigned to: facilities subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and facilities with a high potential for or history of unauthorized, non-storm water discharges.

3. Once the inventory required by Subsection B.1, above, has been completed and the industrial facilities have been prioritized, consistent with Subsection B.2, above, the Co-Permittees are to determine the frequency with which the inventoried facilities are surveyed or inspected. Unless inspected more frequently pursuant to the existing programs, those industrial facilities given a high priority are to be inspected at least once a year, those industrial facilities given a medium priority are to be inspected at least once biannually, and those industrial facilities given a low priority are to be inspected at least once during the term of this Order. In the event that the industrial facility is found to be in violation of the Co-Permittee's Storm Water Ordinances the frequency of inspection shall be increased consistent with a compliance schedule determined appropriate by the Co-Permittee and as outlined in the revised E/CS to cause said facility to be brought into compliance.

4. Industrial facility compliance surveys and inspections shall at a minimum address the following, as outlined in the E/CS:

   a. Check for submittal of a NOI to comply with the General Industrial Activities Storm Water Permit or other permit issued by the State or Regional Board to an industrial facility within the Permit Area;

   b. Confirm compliance with the Co-Permittee's Storm Water Ordinance;

   c. Check for active non-storm water discharges, potential illicit connections, and illegal discharges to the MS4;

   d. Potential for discharge of pollutants in Urban Runoff 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 work areas;

   e. Implementation and maintenance of appropriate BMPs for industrial facilities.

5. Each Co-Permittee shall continue to enforce its ordinances, including its Storm Water Ordinance, resolutions and codes at industrial facilities as necessary to maintain compliance with this Order. Sanctions for non-compliance may include: verbal or written warnings, notice of violation or non-compliance,

obtaining an administrative compliance, stop work, or cease and desist order, the imposition of monetary penalties or criminal prosecution (infraction or misdemeanor).

6. Within twenty-four (24) hours, each Co-Permittee shall continue to provide oral or e-mail notification to the Regional Board of facilities within its jurisdiction it perceives to be an illicit connection, illegal discharge, or that is determined to be an Emergency Situation. Following oral or e-mail notification, a written report must be submitted to Regional Board Staff within ten (10) calendar days of the Co-Permittee's receipt of notice of the Emergency Situation, detailing the nature of the Emergency Situation, corrective actions taken by the facility owner, other relevant information (e.g., past history of non-compliance with the Co-Permittee's Storm Water Ordinance, environmental damage resulting from the Emergency Situation, facility owner responsiveness) and the type of enforcement, consistent with Table 4 of the E/CS, that has been or will be carried out by the Co-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 shall be included in the database identified in Subsection B.1, above.

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 Industrial Activity Storm Water Permit or other permit issued by the State or Regional Board to an industrial facility, the Co-Permittee shall, within two (2) working days, provide written notice to Regional Board staff of the location within its jurisdiction where the incident occurred and describing the nature of the incident.

8. Upon referral of an industrial facility to Regional Board staff for failure to obtain coverage under the General Industrial Activities Storm Water Permit, failure to keep a SWPPP at the industrial facility, or an observed act or omission that suggests failure to comply with either, the Co-Permittee will take no further action at the industrial facility with regard to securing compliance with the General Industrial Activities Storm Water Permit. It is understood by the Co-Permittees and Regional Board staff that this will preclude duplication of effort and insure that consistent direction is provided to the facility owner/manager as to what is required to bring the facility into compliance with the General Industrial Activities Storm Water Permit. Each Co-Permittee shall take appropriate actions to bring an industrial facility into compliance with its local ordinances, rules, regulations, and WQMP, when approved.

9. The number of compliance surveys/inspections and the actions taken shall be documented by the Co-Permittees and an appropriate summary of said actions shall be provided to the Principal Permittee for inclusion in the Annual Report submitted to the Regional Board.

10. As described in the E/CS, the Co-Permittees shall provide training to staff that are involved in conducting compliance surveys/inspections of industrial facilities. Staff training will address the requirements of the following:

    a. The Storm Water Ordinance

    b. This Order and the DAMP

    c. The General Industrial Activities Storm Water Permit and any other permit issued to industrial facilities within the Permit Area by the State or Regional Board; and

    d. The E/CS.

11. Each Co-Permittee's staff assigned to conduct the industrial facilities compliance surveys/inspections will also receive training regarding pollution prevention plans and implementation of appropriate BMPs for industrial facilities. Training programs should be coordinated with Regional Board staff and prior notification of formal classroom training activities shall be provided to the Regional Board staff.

12. Each Co-Permittee shall have arranged for adequate training of its staff assigned to conduct the industrial facilities compliance surveys/inspections within eighteen (18) months of this Order's adoption, and on an annual basis thereafter. New hires or transfers that will be performing the industrial facilities compliance surveys/inspections for a Co-Permittee will be trained within six (6) months of starting field duties.

13. The Permittees need not inspect Industrial facilities already inspected by Regional Board staff if the inspection of said site, given its prioritization consistent with the E/CS, was concluded within the time frame specified for said site's prioritization. To facilitate this, Regional Board staff will post a list of facilities inspected on the website or make this information available to the Co-Permittees by other pre-arranged means.

C. Commercial Facilities

Within eighteen (18) months of this Order's adoption, the Permittees shall review the E/CS to reflect the following:

1. Those Co-Permittees that presently have an existing compliance survey/inspection program for commercial facilities (the cities of Corona and Riverside as to their respective POTW pre-treatment inspections and the County through the CAP) shall develop within eighteen (18) months of this Order's adoption, an inventory of the commercial facilities that are surveyed or inspected pursuant to the existing program. The inventory will be updated on a routine basis from such information as conditional use permits, plot plans, building permits, business licenses, occupancy permits, hazardous materials permits, and hazardous waste generator permits are approved for development of a new commercial facility, additional commercial facilities are identified through the CAP and compliance surveys and inspections are completed and new commercial facilities are identified. Each Co-Permittee without a commercial facility inspection program shall include in its inventory of commercial facilities information from the CAP (including automobile mechanical repair, maintenance, fueling, or cleaning; automobile and other vehicle body repair or painting; painting and coating; pool, lake and fountain cleaning (base of operations)) that is relevant to its jurisdiction and may include information derived from other agencies providing services within its jurisdiction, including, but not limited to, the POTW. This inventory shall be maintained in a computer database system. The revised E/CS should provide for the inclusion of the following information: facility name (dba), address, city, zip code, mailing address (if different), location reference (GIS coordinates, cross streets, APN, etc.) facility contact and phone number, SIC code(s), and site size. An electronic copy or update of the database, in a format acceptable to the Executive Officer, shall be provided with each Annual Report or upon request. Linking the database to a GIS is recommended but is not required.

2. In addition, each Permittee shall develop within twenty-four (24) months of this Order's adoption, an inventory of the commercial facilities/companies listed below within its jurisdiction:

   a. Mobile automobile or other vehicle washing (base of operations);

   b. Mobile carpet, drape or furniture cleaning (base of operations);

   c. Mobile high pressure or steam cleaning (base of operations);

   d. Nurseries and greenhouses;

   e. Landscape and hardscape installation (base of operations); and,

   f. Other commercial sites/sources that the Permittee determines may contribute a significant pollutant load to the MS4.

3. Within twelve (12) months of this Order's adoption, the CAP will be revised to cause compliance surveys/inspections of restaurants within Riverside County that, at a minimum, include the following:

    a. Oil and grease disposal to verify that these wastes are not discharged 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 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 discharged to MS4s from those areas; and,

    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.

4. The revised E/CS shall prioritize commercial 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 commercial activities (SIC codes), materials or wastes used or stored outside, pollutant discharge potential, facility size, proximity and sensitivity of Receiving Waters, frequency of existing inspections, based upon other California statutes or regulations, or local regulations, ordinances, or codes, and any other relevant factors. At a minimum, a high priority classification shall be assigned to facilities with a high potential for or history of unauthorized, non-storm water discharges.

5. Once the inventory required by Subsection C.1, above, has been completed and the commercial facilities have been prioritized, consistent with Subsection C.4, above, the Co-Permittees are to determine the frequency with which the inventoried facilities are surveyed or inspected, pursuant to existing programs. Unless inspected more frequently pursuant to the existing programs, those commercial facilities given a high priority are to be inspected at least once a year, those commercial facilities given a medium priority are to be inspected at least once biannually, and those commercial facilities given a low priority are to be inspected at least once during the term of this Order. In the event that the commercial facility is found to be in violation of the Co-Permittee's Storm Water Ordinances the frequency of inspection shall be increased consistent with a compliance schedule determined appropriate by the Co-Permittee and as outlined in the revised E/CS to cause said facility to be brought into compliance.

6. The commercial facility compliance survey/inspection shall, at a minimum, address the following, consistent with the E/CS:

    a. Commercial activity type(s) and SIC code(s);

b. Compliance with each Co-Permittee's Storm Water Ordinances; If applicable, check for submittal of a NOI to comply with the General Industrial Activities Storm Water Permit or other permit issued by the State or Regional Board; and,

c. The E/CS.

7. The Permittees will expand its existing public educational program to include a concentrated, business-specific element. This expanded education element will be described in detail in the WQMP and the DAMP. This education program will include criteria to provide the commercial facility owner and/or operator with information to encourage compliance with the Co-Permittees' Storm Water Ordinances and the General Industrial Activities Storm Water Permit or other permit issued by the State or Regional Board, if applicable. If the commercial facility is found to need coverage under the General Industrial Activities Storm Water Permit or other permit issued by the State or Regional Board, information will be provided and the Regional Board will be notified.

8. Each Co-Permittee shall enforce its Storm Water Ordinance prohibiting non-exempt non-storm water discharges at commercial facilities. Sanctions for non-compliance may include: verbal and/or written warnings, notice of violation or non-compliance, obtaining an administrative compliance, stop work, or cease and desist order, a civil citation or injunction, the imposition of monetary penalties or criminal prosecution (infraction or misdemeanor).

9. The number of compliance surveys/inspections and the actions taken shall be documented by the Co-Permittees and an appropriate summary of said actions will be provided to the Principal Permittee for inclusion in the Annual Report submitted to the Regional Board.

10. Within twenty-four (24) hours of receipt of notice by its staff or from a third party, each Co-Permittee shall continue to provide oral or e-mail notification to the Regional Board of facilities within its jurisdiction that it perceives to have an illicit connection, illegal discharge, or that is determined to be an Emergency Situation. Following oral or e-mail notification, a written report must be submitted to Regional Board Staff within ten (10) calendar days of the Co-Permittee's receipt of notice of the Emergency Situation. All written reports shall detail the nature of the Emergency Situation, identify corrective actions taken by the facility owner, and note other relevant information (e.g., past history of non-compliance, environmental damage resulting from the Emergency Situation, facility owner or manager's responsiveness) and the type of enforcement, consistent with Table 4 of the E/CS, that has been or will be carried out by the Co-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 will be included in the database identified in Subsection C.1, above.

11. If a Co-Permittee discovers, or receives notice by its staff or from a third party of a non-Emergency Situation representing a possible violation of the General Industrial Activity Storm Water Permit, if applicable to the commercial facility, or other permit issued by the State or Regional Board to a commercial facility, the Co-Permittee shall, within two (2) working days, provide written notice to Regional Board staff of the location within its jurisdiction where the incident occurred and describing the nature of the incident.

12. Not all commercial facilities are required to obtain coverage under the General Industrial Activities Storm Water Permit. However, if required to obtain coverage and upon referral of a commercial facility to Regional Board staff for failure to obtain coverage under the General Industrial Activities Storm Water Permit, failure to keep a SWPPP at the commercial facility, or an observed act or omission that suggests failure to comply with the General Industrial Activities Storm Water Permit, the Co-Permittee will take no further action at the commercial facility with regard to securing compliance with the General Industrial Activities Storm Water Permit. It is understood by the Co-Permittees and Regional Board staff that this will preclude duplication of effort and insure that consistent direction is provided to the facility owner/manager as to what is required to bring the facility into compliance with the General Industrial Activities Storm Water Permit. Each Co-Permittee shall take appropriate actions to bring a commercial facility into compliance with its local ordinances, rules, regulations, and WQMP, when approved.

13. As described in the E/CS, Co-Permittees will provide training to staff that is involved in the compliance surveys/inspections of commercial facilities. Staff training will address the requirements of the following:

    a. The Storm Water Ordinance;

    b. This Order and the DAMP;

    c. The General Industrial Activities Storm Water Permits and any other permit issued to a commercial facility within the Permit Area by the State or Regional Board;

    d. The E/CS;

    e. Pollution prevention plans; and,

    f. Implementation and maintenance of appropriate BMPs for commercial sites.

14. Training programs should be coordinated with Regional Board staff and prior notification of formal classroom training activities shall be provided to Regional Board staff.

15. Each Co-Permittee shall have arranged for adequate training of its current municipal staff assigned to conduct the commercial facility compliance

survey/inspection within eighteen (18) months of this Order's adoption, and on an annual basis thereafter. New hires or transfers that will be performing the commercial facilities compliance surveys/inspections for a Co-Permittees will be trained within six (6) months of starting field duties.

X. EDUCATION AND OUTREACH

A. The Urban Runoff regulations require public participation in the Urban Runoff management program development and implementation. As such the Permittees shall solicit and consider comments received from the public and submit copies of the comments to the Executive Officer with the Annual Reports due on November 30th, beginning with the report due on November 30, 2003. In response to the public comments, the Permittees may modify reports, plans, or schedules prior to submittal to the Executive Officer.

B. The Permittees shall continue to participate in a joint outreach with other programs including, but not limited to, the California Urban Runoff Quality Task Force, Caltrans, and other Urban Runoff programs to disseminate a consistent message on Urban Runoff pollution prevention to the public. The Permittees shall continue to sponsor or staff an Urban Runoff table or booth at community, regional, and/or countywide events to distribute public education materials to the public. Each Permittee shall sponsor at least one event per year that provides a venue for Urban Runoff education outreach.

C. Within six (6) months of this Order's adoption, 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 changes to the public and business education program. The goal of the public and business education program shall be to target 100% within the Permit Area of the residents, including businesses, commercial and industrial establishments and to measurably increase the awareness of Urban Runoff quality of the targeted groups. Through use of local print, radio and television, the Permittees must ensure that the public and business education program makes a minimum of 5 million "impressions" per year (as defined in Appendix 4, Glossary).

D. Within twelve (12) months of formation, the Public Education Committee shall conduct an evaluation to determine the best method of establishing a procedure(s) for providing educational and General Industrial Activities Storm Water Permit compliance guidance materials to businesses within their jurisdiction. This procedure(s) for distributing educational materials to businesses shall be implemented within six (6) months after conducting said evaluation.

E. The Permittees shall continue to implement the public education efforts already underway and shall implement the most effective elements of the public and business education strategy contained in the Storm Water/Clean Water Protection Program. Within eighteen (18) months of formation, the Public Education Committee shall propose a survey for measuring changes in awareness of Urban Runoff quality as a result of the education program. The findings of this survey will provide information for

the development of a future Public Education action plan. Upon approval by the Executive Officer, the study shall be completed by the end of the permit cycle.

F. Within twelve (12) months of this Order's adoption, the Public Education Committee shall develop BMP guidance for restaurants, automotive service centers, and gasoline service stations, and the discharges listed in Section II.C. of this Order, where appropriate, for the Co-Permittees to distribute to these facilities.

G. Within twelve (12) months of this Order's adoption, the Permittees shall develop public education materials to encourage the public to report (including a hotline line number to report) illegal dumping 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 Urban Runoff and BMP information. This hotline and website shall continue to be included in the public and business education program and shall be submitted for listing in the governmental pages of all major regional phone books.

H. Within eighteen (18) months of this Order's adoption, the Permittees shall develop BMP guidance for the household use of fertilizers, pesticides, and other chemicals, mobile vehicle maintenance, carpet cleaners, commercial landscape maintenance, and pavement cutting. Additionally, BMP guidance shall be developed for categories of discharges listed in Section II.C, identified to be significant sources of pollutants unless appropriate BMPs are implemented. These guidance documents shall be distributed to the public, trade associations, etc., through participation in community events, trade association meetings, and/or mail.

XI. MUNICIPAL FACILITIES PROGRAMS AND ACTIVITIES

A. 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 limited to, those listed in Appendix 2. As such, these organizations are expected to actively participate in implementing this area-wide Urban Runoff program. The Permittees shall be responsible for involving the public agency organizations in their Urban Runoff program.

B. Within eighteen (18) months of this Order's adoption, the Permittees, in coordination with the Riverside County Fire Chiefs Association, or equivalent organization, shall develop a list of appropriate BMPs to be implemented to reduce pollutants from fire training activities, fire hydrant/sprinkler testing or flushing, and BMPs feasible for emergency fire fighting flows.

C. Each Permittee shall continue to implement the recommendations in the Municipal Facilities Strategy to ensure that public agency 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. By August 1 of each year, the Permittees shall review their activities and facilities to determine the need for revisions to the Municipal Facilities Strategy. The Annual Report shall include the findings of this review and a schedule

for needed revisions. Revisions should consider a pollution prevention strategy to ensure that the public agency facilities and/or activities including those that are currently not required to obtain coverage under the State's General Urban Runoff Permits or the San Jacinto Watershed Construction Activities Permit are not sources of pollutants into the Waters of the U. S. In addition, the Permittees shall evaluate the applicability of the Municipal Facilities Strategy to municipal maintenance contracts, contracts for field maintenance operations, and leases.

D. Within six (6) months of adoption of this Order, the Permittees shall evaluate their established criteria for inspections of the MS4s and establish criteria for regular maintenance thereof.

E. Within twenty (20) months of this Order's adoption, the Permittees shall complete an assessment of their MS4s 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 2004-2005 Annual Report.

F. Within twelve (12) months of this Order's adoption, the Permittees shall develop and distribute model maintenance procedures for public agency activities and MS4s such as street sweeping, catch basin stenciling, MS4 inspection, "cleaning" (see definition in Appendix 4), and maintenance. This shall be included in the 2004-2005 Annual Report.

G. Within twelve (12) months of this Order's adoption, the Permittees shall review, document, and submit for approval by the Executive Officer, their program for cleaning out open channel MS4s, catch basins, retention/detention basins, and wetlands created for Urban Runoff treatment, 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, regulatory restrictions, cost/benefit, and the presence of downstream regional facilities that would remove the types of pollutants found in the drainage facilities. Using these factors, the Permittees shall propose revised clean out schedules and frequency for the specified MS4s during the wet and dry season to protect Receiving Water quality to the MEP. The Permittees should be prepared to implement the approved clean out program within twenty-four (24) months of this Order's adoption. The inspection and maintenance frequency for all portions of the MS4s shall be evaluated annually to determine the need for increasing the inspection and maintenance frequency. This information shall initially be included in the 2003-2004 Annual Report.

H. If by November 1, 2004, the Permittees have not developed revised clean out schedules and frequencies, required in Subsection G, above, and/or the revised schedules and frequencies have not been approved by the Executive Officer, then each Permittee shall expand existing programs to inspect, clean, and maintain at least 80% of its open channel MS4s, catch basins, retention/detention basins, and wetlands created for Urban Runoff treatment on an annual basis, with 100% of the facilities included in a two-year period, using the model maintenance procedures developed by the Permittees in Subsection F, above. Each Permittee shall clean those open channel

MS4s and retention/detention basins where there is evidence of illegal discharge. In addition, each Permittee shall clean those retention/detention basins where the inspection reveals that the sediment/storage volume is about 25% full or if accumulated sediment or debris impairs the hydraulic capacity of the facility.

I. Contractor training requirements for Urban Runoff management shall be included in new contracts and contracts that come up for renewal. This shall be reported in the 2002-2003 Annual Report.

J. Within eighteen (18) months of this Order's adoption, 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 2004-2005 Annual Report.

K. At least on an annual basis, each Permittee shall provide training to the public agency staff and to contract field operations staff on fertilizer and pesticide management, model maintenance procedures, and other pollution control measures. Permittee staff responsible for application of fertilizer or pesticides shall attend at least three of these training sessions during the five-year term of this Order (from 2002 to 2007).

L. Each Permittee shall identify areas that are not subject to street sweeping due to lack of continuous curb and gutter, and evaluate their potential for impacting Urban Runoff quality. Appropriate BMPs shall be implemented where significant water quality impact is identified associated with lack of street sweeping. This shall be reported in the 2003-2004 Annual Report.

M. Each Permittee shall annually evaluate their street/road sweeping frequency based on land use and historical information to determine the need to revise their sweeping frequency. This information shall be provided in the Annual Report beginning with the 2003-2004 Annual Report.

N. The Permittees shall maintain an updated site-specific Urban Runoff pollution prevention plan for their facilities and activities.

The San Bernardino County Flood Control District and RCFC&WCD, in cooperation with local municipalities, are coordinating an effort to construct flood control facilities in the Chino-Corona Agricultural Preserve area. A status report of this project shall be provided in the Annual Report.

XII. MUNICIPAL CONSTRUCTION PROJECTS/ACTIVITIES

A. All municipal construction activity shall be in compliance with the latest version of the applicable Construction Activity Permit.

B. This Order authorizes the discharge of storm water runoff from construction projects that may result in land disturbance consistent with the acreage criteria of the current General Construction Activity Storm Water Permit.

C. By March 10, 2003, or as specified in the latest version of the General Construction Activity Storm Water Permit, the Permittees shall comply with the requirements for municipal construction projects that may result in land disturbance consistent with the acreage criteria of the current Construction Activity Permits.

D. Prior to commencement of construction activities, the Permittees shall notify the Executive Officer of the proposed construction project by submitting a Notice of Intent (NOI) provided in Attachment 5. The submittal fees for these NOIs are waived for the Permittees. Upon completion of the construction project, the Executive Officer shall be notified of the completion of the project by submitting a Notice of Termination (NOT), provided in Attachment 5.

E. The Permittees shall develop and implement a SWPPP and a monitoring and reporting program that is specific for the construction project prior to the commencement of construction activities. The SWPPP shall be kept at the construction site and released to the public and/or Regional Board staff upon request.

F. The SWPPP and the monitoring and reporting program for the construction projects shall be consistent with the requirements of the latest version of the Construction Activity Permits, as applicable for the size and location of the site. If the site is within the San Jacinto Watershed then the terms and conditions of the San Jacinto Watershed Construction Activities Permit apply, except with respect to submittal of a fee with the NOI and the requirement for this Regional Board to review and approve the site specific SWPPP. The applicable Permitee shall review and approve the SWPPP prepared by their contractor to insure the SWPPP substantially complies with the San Jacinto Watershed Construction Activities Permit. Upon request, the applicable Permittee shall submit a copy of the approved SWPPP.

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 Construction Activity Permits, as applicable.

H. Emergency public works projects required to protect public health and safety are exempted from compliance with the SWPPP requirements of subsection E, and the requirements of subsections F and G, above.

XIII. PROGRAM MANAGEMENT/DAMP REVIEW

A. The Permittees shall continue to implement all elements of the approved DAMP. Program elements revised in compliance with the requirements of this Order shall be implemented in conformance with the schedules specified in this Order following approval of the Executive Officer. Within six (6) months of approval of the WQMP by the Executive Officer, or no later than January 1, 2005, whichever comes first, the Permittees shall submit a revised DAMP incorporating the revised program elements and other information as specified by this Order for approval by the Executive Officer. The Permittees shall implement all elements of the approved DAMP.

B. By August 1 of each year, beginning in 2004, the Permittees shall evaluate the DAMP to determine the need for revisions. The Permittees shall modify the DAMP, as necessary, or at the direction of the Executive Officer to incorporate additional provisions. Such provisions may include regional and watershed-specific requirements and/or WLAs developed and approved pursuant to the TMDL process for Impaired Waterbodies. Proposed revisions to the DAMP shall be submitted to the Executive Officer for review and approval. Revisions to the DAMP approved by the Executive Officer shall be implemented in a timely manner. The Annual Report shall include the findings of this review and a schedule for needed revisions.

C. At a minimum, each Annual Report shall include a progress report of:

1. The formal training and coordination meeting needs for the Co-Permittees' staff responsible for performing compliance survey/inspections or educational programs;

2. Source identification and prioritization;

3. Grading and erosion control for construction sites;

4. Verification of coverage under the appropriate General Construction and Industrial Activities Permits;

5. Facility inspection and enforcement consistent with local ordinances, rules, and regulations;

6. Procedures for reporting to the Permittees and this Regional Board non-compliance with each Co-Permittee's Storm Water Ordinance and enhancing current planning review processes to better address issues regarding Urban Runoff;

7. Implementation of new development BMPs, or identification of regional or sub-regional Urban Runoff treatment/infiltration BMPs in which New Development projects could participate.

D. Each Permittee shall designate at least one representative to the Management Steering Committee and Technical Committee as described in Section I.A.2. of this Order. 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 three (3) out of four (4) Management Steering Committee meetings and eight (8) out of ten (10) Technical Committee meetings per year.

XIV. MONITORING AND REPORTING PROGRAM

The Permittees shall comply with Monitoring and Reporting Program No. R8-2002-0011, located in 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. R8-2002-0011 located in Appendix 3. In addition, significant completion and implementation dates required by this Order are outlined in Section V of the Monitoring and Reporting Program (Appendix 3).

XV. PROVISIONS

A. GENERAL

1. 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. Unresolved 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 BMPs to reduce, to the MEP, the discharge of pollutants from MS4s in order to support further progress towards attainment of water quality objectives.

3. Permittees shall demonstrate compliance with all the requirements in this Order and shall implement their DAMP and 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 and approved by the Executive Officer. The DAMP and amendments thereto are hereby made an enforceable part of this Order.

4. Each Permittee shall continue to implement necessary controls, in addition to those specific controls and actions required by (1) the terms of this Order and (2) the DAMP, to reduce the discharge of pollutants in Urban Runoff to the MEP.

5. The Permittees shall complete changes to plans or programs described in this Order no later than twelve (12) months after this Order goes into effect, unless otherwise specified.

6. 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 during the development and implementation of Urban Runoff management programs 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 Health and Safety Code of the State of California.

7. The Permittees shall report to the Executive Officer:

a. Any enforcement actions and known discharges of Urban Runoff or wastewater to facilities owned or operated by the Permittees which may impair domestic water supply sources (e.g., discharges due to a levee break, illegal discharges to the street, etc.) or which may have an impact on human health or the environment; if the discharge is to Canyon Lake or any tributary to Canyon Lake, Elsinore Valley Municipal Water District shall also be notified immediately;

b. Industrial and/or construction facilities found not to be in compliance with the Construction Activity Permits, or where the activities may be contributing pollutants to the Waters of the U. S.; and,

c. 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 the Waters of the U. S.

8. The Permittees shall coordinate their activities to promote consistent implementation of Urban Runoff regulations.

9. The permit application and special NPDES program requirements contained in 40 CFR 122.21 (a), (b), (d) (2), (f), and (p), 122.41 (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), and (l); and 122.42 (c) are incorporated into this Order by reference.

10. 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 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.

11. Permittees shall continue to take reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

12. Regional Board staff, USEPA, and other authorized representatives shall be allowed to:

    a. Inspect Permittee records associated with compliance of this Order.

    b. Access to and copying of records that are kept under the conditions of this Order.

    c. 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.

d. 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.

e. Review the Permittee's programs and require modification to their programs to comply with the requirements of this Order.

f. Request copies of data, monitoring reports, and sampling data and copies of the Permittee's conclusions and evaluations of the data.

B. FISCAL RESOURCES

The Permittees shall prepare and submit a unified fiscal analysis report appropriate for implementation of the requirements of this Order to the Executive Officer. The fiscal analysis report shall be submitted no later than November 30, of each year and shall at a minimum include the following:

1. Each Permittee's expenditures for the previous fiscal year;

2. Each Permittee's budget for the current fiscal year;

3. A description of the source of funds;

XVI. PERMIT EXPIRATION AND RENEWAL

A. This Order expires on October 26, 2007, and the Permittees must file a ROWD no later than one hundred eighty (180) calendar 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. Any revisions to the DAMP including, but not limited to, 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, proposed pilot studies, etc.;

2. Any new or revised program elements and compliance schedule(s) necessary to comply with Section III of this Order.

3. Changes in land use and/or population including map updates; and

4. Significant changes to the MS4s, outfalls, detention or retention basins or dams, and other controls, including map updates of the MS4s.

B. 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 and policies adopted by the State Board or amendments to the Basin Plan approved by the Regional Board, the State Board, and, if necessary, by the Office of Administrative Law; or

3. To comply with applicable requirements, guidelines, or regulations issued or approved under the CWA, if the requirements, guidelines, or regulations contain different conditions or additional requirements than those included in this Order.

4. To incorporate new or revised program elements and compliance schedule(s) necessary to comply with this Order.

5. To incorporate any requirements imposed upon the Permittees through the TMDL process.

6. Pursuant to Section 13228 of the Water Code, this Regional Board may exercise its option allowing the recently annexed 375 acres to the City of Murrieta that are located within the Region to be regulated by the San Diego Regional Water Quality Control Board's Riverside MS4 Permit once it has been renewed.

C. This Order shall serve as a NPDES permit pursuant to Section 402 (p) of the CWA, or amendments thereto, and shall become effective ten (10) calendar 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, this Order shall not become effective until such objection is withdrawn.

D. Order No. 96-30 is hereby rescinded.

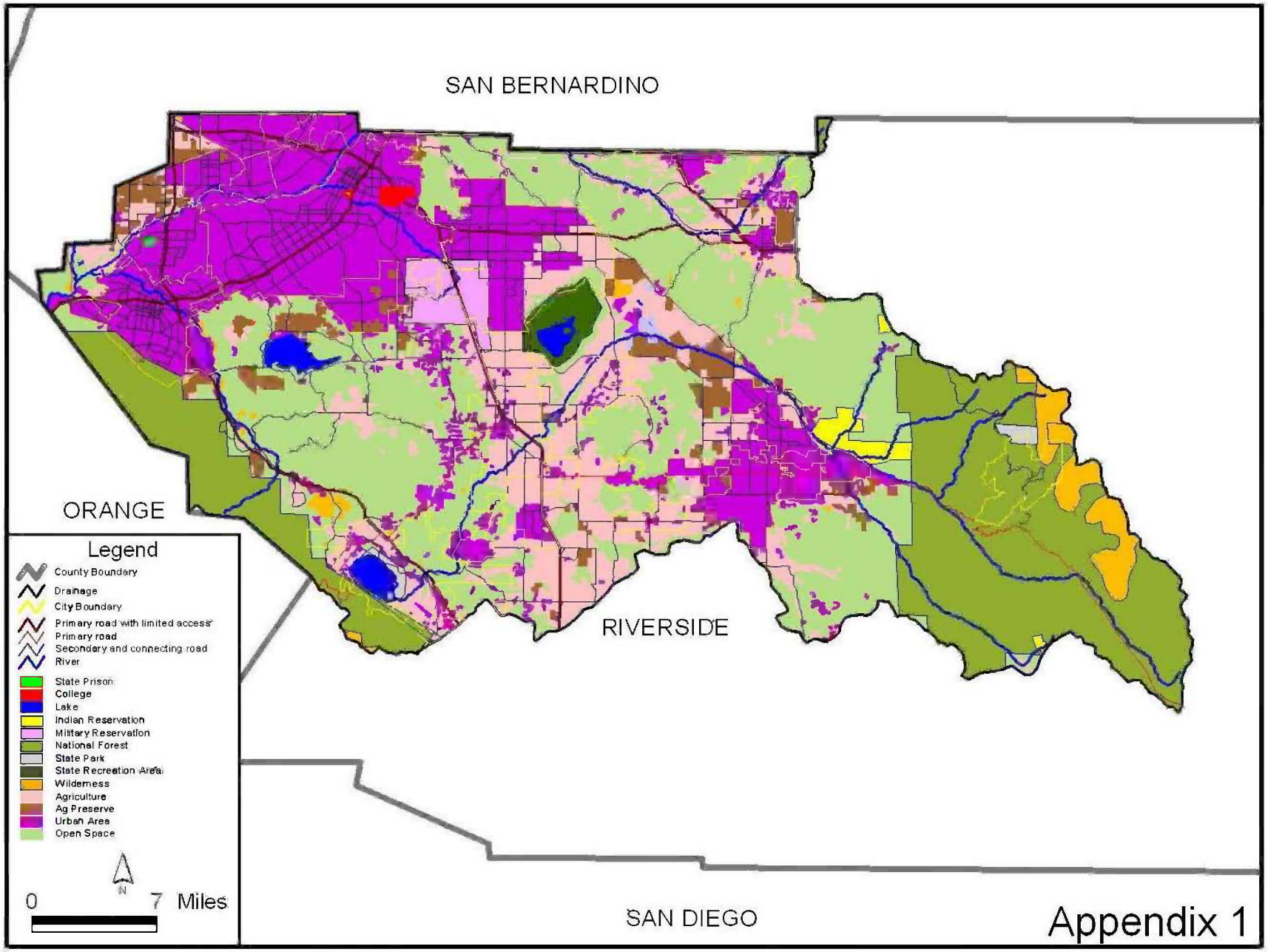
I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on **October 25, 2002.**

Gerard J. Thibeault
Executive Officer

APPENDIX 1

Permit Area

ORDER NO. R8-2002-0011


SAN BERNARDINO
ORANGE
RIVERSIDE
SAN DIEGO
Legend
County Boundary
Drainage
City Boundary
Primary road with limited access
Primary road
Secondary and connecting road
River
State Prison
College
Lake
Indian Reservation
Military Reservation
National Forest
State Park
State Recreation Area
Wilderness
Agriculture
Ag Preserve
Urban Area
Open Space
N
0
7 Miles
Appendix 1

APPENDIX 2

OTHER ENTITIES THAT MAY DISCHARGE POLLUTANTS TO MS4s

ORDER NO. R8-2002-0011

Appendix 2

OTHER ENTITIES THAT MAY DISCHARGE POLLUTANTS TO MS4s

Government Agencies

Department of the Air Force,
March Air Force Base – Special Districts
State Parks
U.S. Army Corps of Engineers
Caltrans
Department of Corrections
U.S. Forest Service

Hospitals

Corona Community Hospital
Hemet Valley Medical Center
Kaiser Foundation Hospital – Riverside
Loma Linda Hospital (Sun City)
Parkview Memorial Hospital
Riverside Community Hospital
Riverside County Regional Medical Center
Riverside General Hospital

Railroads

AT&SF Railway Company
Burlington Northern Railroad Company
Southern Pacific Railroad Company
Union Pacific Railroad

Special Districts/ Wastewater Agencies

Edgemont Community Services District
Jurupa Community Services District
Santa Ana Watershed Project Authority
Rubidoux Community Services District
Valley Wide Park and Recreation District

School Districts

Alvord Unified School District
Corona – Norco Unified School District
Hemet Unified School District
Lake Elsinore Unified School District
Menifee Union School District
Moreno Valley Unified School District
Nuview Union School District
Perris Elementary School District
Perris Union High School District
Riverside Unified School District
Romoland School District
San Jacinto Unified School District
Val Verde School District

Universities and Colleges

California Baptist University
La Sierra University
Mt. San Jacinto College
Riverside Community College
University of California, Riverside

Water Districts

Eastern Municipal Water District
Elsinore Valley Municipal Water District
Lake Hemet Municipal Water District
Lee Lake Water District
Metropolitan Water District
Western Municipal Water District

APPENDIX 3

MONITORING AND REPORTING PROGRAM

ORDER NO. R8-2002-0011

California Regional Water Quality Control Board
Santa Ana Region

Urban Runoff Monitoring and Reporting Program No. R8-2002-0011
NPDES No. CAS618033

for
Riverside County Flood Control and Water Conservation District,
The County of Riverside, and the Cities of Riverside County
within the Santa Ana Region
Area Wide Urban Runoff

I. GENERAL

A. Revisions of the Urban Runoff 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 of the Order, 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.

B. The Executive Officer is authorized to allow the Permittees to participate in statewide, national, or other monitoring programs in lieu of this Urban Runoff monitoring program.

C. All sample collection, handling, storage, and analysis shall be in accordance with test procedures under 40 CFR Part 136 (latest edition) "*Guidelines Establishing Test Procedures for the Analysis of Pollutants*," promulgated by the USEPA, the guidance being developed by the State Board pursuant to Water Code Section 133383.5, or other methods which are more sensitive than those specified in 40 CFR 136 and approved by the Executive Officer.

D. The Permittees are authorized to complement their Urban Runoff monitoring data with data from other monitoring sources, provided the monitoring conditions and sources are similar to those in the Santa Ana Watershed.

E. The Principal Permittee has been monitoring Urban Runoff and Receiving Waters since the first permit term. It is recognized that some of the objectives noted in Section II, below, may not have been attained during the previous permit terms. Ongoing long-term Urban Runoff monitoring will help to accomplish these objectives. The Regional Board authorizes the Executive Officer to evaluate and determine adequate progress toward meeting each objective.

F. This Order references three components of the Consolidated Monitoring Program (the “CMP”): (1) The existing CMP shall continue to be implemented until the revised CMP is approved; (2) The CMP will be reviewed and revised under this Order to identify data gaps and to attain the objectives specified in Section II, below and (3) Other regional monitoring efforts where the Permittees participate or contribute resources.

G. Pending approval of the revised CMP, current monitoring efforts will focus on areas with elevated pollutant concentrations. The Principal Permittee, in coordination with Regional Board staff, will identify these monitoring locations within six (6) months of adoption of this Order.

H. The Permittees shall develop and submit, within twelve (12) months of adoption of this Order a revised CMP for approval by the Executive Officer. The revised CMP should reflect an integrated watershed monitoring approach and be capable of attaining the objectives mentioned below. The development and implementation of the monitoring program shall be in accordance with any requirements developed by the State Board and the time schedules prescribed by the Executive Officer.

I. It is highly recommended that the Permittees cooperate, as appropriate, with other MS4 Permittees (including Orange County and San Bernardino County), the Southern California Coastal Water Research Project (SCCWRP), POTW operators, the dairy industry, the Santa Ana Watershed Project Authority (SAWPA), and other public and private organizations in the watershed to develop coordinated surface water quality monitoring programs, databases, and special studies.

II. OBJECTIVES

The overall goal of the Urban Runoff monitoring program is to support the development of an effective Urban Runoff management program. The following are the major objectives:

A. To identify those Receiving Waters, which, without additional action to control pollution from Urban Runoff that cannot reasonably be expected to achieve or maintain applicable water quality standards required to sustain the beneficial uses, the goals, and the objectives of the Basin Plan.

B. To develop and support an effective MS4 management program.

C. To identify significant water quality problems, related to discharges of Urban Runoff within the Permit Area.

D. To define water quality status, trends, and pollutants of concern associated with urban discharges and their impact on the beneficial uses of the Receiving Waters.

E. To analyze and interpret the collected data to determine the impact of Urban Runoff and/or validate any water quality models.

F. To characterize pollutants associated with Urban Runoff, and to assess the influence of urban land uses on Receiving Water quality and the beneficial uses of Receiving Waters.

G. Identify significant water quality problems related to urban storm water discharges.

H. To identify other sources of pollutants in storm water runoff to the maximum extent possible (e.g., including, but not limited to, atmospheric deposition, and contaminated sediments, other non-point sources, etc.)

I. To identify and prohibit illicit connections.

J. To identify and prohibit illicit discharges.

K. To verify and to identify sources of Urban Runoff pollutants.

L. To identify and prohibit illicit connections.

M. To verify and to control illegal discharges.

N. To evaluate the effectiveness of the DAMP and WQMPs, including an estimate of pollutant reductions achieved by the structural and nonstructural BMPs implemented by the Permittees.

O. To conduct monitoring in cooperation with San Bernardino County for investigation of bacteriological impairments in the upper Santa Ana River due to Urban Runoff.

P. To evaluate the costs and benefits of proposed Urban Runoff management programs to protect Receiving Water quality.

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III. MONITORING PROGRAM REQUIREMENTS

A. TMDL/303(d) Listed Waterbody Monitoring: The Permittees should continue to participate in the TMDL and Southern California Cooperative Storm Water Research/Monitoring programs as they relate to Urban Runoff. In addition, strategies shall be revised/developed to evaluate the impacts of Urban Runoff on identified impairments within the Santa Ana River watershed and other tributary 303(d) listed waterbodies.

B. The Permittees shall revise their CMP, within twelve (12) months of adoption of this Order. The revised CMP shall consider, at a minimum and include, the following monitoring components or their equivalent:

1. Mass Emissions Monitoring:

   a. An estimate of flow in cubic feet per second (cfs) from the outfall/stream at the time of sampling.

   b. Monitor mass emissions in Urban Runoff to: (a) estimate the total mass emissions from the MS4 to Receiving Waters; (b) assess trends in mass emissions associated with Urban Runoff over time; and (c) to determine if Urban Runoff is contributing to exceedances of water quality objectives or beneficial uses in Receiving Waters by comparing results to the Basin Plan.

   c. Representative samples from the first storm event and two more storm events shall be collected 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 that 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 identified in the water analyses.

2. Microbial Monitoring: A monitoring program to determine the sources of bacteriological contamination in the Upper Santa Ana River, is being developed in collaboration with the MS4 Permittees in San Bernardino County. This program associated with Urban Runoff shall include wet and dry weather monitoring, as appropriate, for bacteriological constituents in the Santa Ana River and its tributaries.

3. Water Column Toxicity Monitoring: Analyses for toxicity to aquatic species shall be performed on Receiving Water samples to determine the impacts of Urban Runoff on toxicity of Receiving Waters. *Ceriodaphnia dubia* fertilization, Fathead Minnow larval survival test, and Selenastrum Capricornutum growth test shall be used to evaluate toxicity on the sample from the first rain event, plus one other wet weather sample. In addition, where applicable collect two dry weather samples or propose equivalent procedures in the CMP. In addition,

criteria shall be identified which will trigger the initiation of Toxicity Identification Evaluations (TIEs) and Toxicity Reduction Evaluations (TREs).

4. Reconnaissance: The Permittees shall review and update their 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 enforcement actions for storm water violations and unauthorized, non-storm water discharges that can then be used to more effectively target reconnaissance efforts.

5. Land Use Correlations: The Permittees shall develop and implement strategies for determining the effects of urban 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 sub-watershed, one relationship that may be determined is the impact of urban 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 urban land uses to the sediment loading of Canyon Lake, Lake Elsinore, and the Santa Ana River (Reaches 3 and 4).

6. Sources of Data: Where possible and applicable, data shall be obtained from monitoring efforts of other public or private agencies/entities (e.g., Caltrans).

7. Bioassessments: The development of an Index of Biological Integrity for Southern California. This shall include the selection and identification of appropriate bioassessment station locations, sampling scheme(s), and shall also be capable of attaining the objectives mentioned in Section II, above. The Permittees may develop bioassessments in coordination or cooperation with other parties as addressed in Section I.I., above.

C. Within twelve (12) months of adoption of this Order, the Permittees shall develop and submit for approval of the Executive Officer, their revised CMP, which should support the achievement of the above-stated goals. The implementation of the CMP shall be in accordance with the time schedules prescribed by the Executive Officer. At a minimum, the CMP shall address the following and any requirements developed by the State Board in accordance with Water Code Section 13383.5:

1. Uniform guidelines for quality control, quality assurance, data collection and data analysis.

2. A procedure 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 sources of pollutants discharged to the MS4; 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 Urban Runoff quality and seasonal and other bias in the collected data; and to identify any unique features of the Permit Area. The Permittees are encouraged to use data from similar studies, if available.

3. A description of the CMP including:

   a. The number of monitoring stations;

   b. Monitoring locations within MS4s, major outfalls, and Receiving Waters; Environmental indicators (e.g., ecosystem, flow, biological, habitat, chemical, sediment, stream health, etc.) chosen for monitoring;

   c. 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 qualifications of laboratories performing analyses;

   d. A procedure for analyzing the collected data and interpreting the results including an evaluation of the effectiveness of the management practices, and need for any refinement of the WQMPs or the DAMP.

   e. Parameters selected for field screening and for laboratory work; and

   f. A description of the responsibilities of all the participants in this program, including cost sharing.

IV. REPORTING

A. 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 under penalty of perjury.

B. The Permittees shall submit an Annual Report to the Executive Officer and to the Regional Administrator of the USEPA, Region 9, no later than November 30th, of each year. This progress report may be submitted in a mutually agreeable electronic format. At a minimum, the Annual Report shall include the following:

   1. A review of the status of program implementation and compliance (or non-compliance) with the schedules contained in this Order;

   2. An assessment of the effectiveness of control measures established under the illicit discharge elimination program and the DAMP. The effectiveness may be measured in terms of how successful the program has been in eliminating illicit connections/illegal discharges and reducing pollutant loads in Urban Runoff;

3. An assessment of any modifications to the WQMPs, or the DAMP made to comply with CWA requirements to reduce the discharge of pollutants to the MEP;

4. A summary, evaluation, and discussion of monitoring results from the previous year and any changes to the monitoring program for the following year;

5. A fiscal analysis progress report as described in Section XV, Provision B., of Order No. R8-2002-0011;

6. A draft work plan that describes the proposed implementation of the WQMPs and the DAMP for next fiscal year. The work plan shall include clearly defined tasks, responsibilities, and schedules for implementation of the storm water program and each Permittee's actions for the next fiscal year;

7. Major changes in any previously submitted plans/policies; and

8. An assessment of the Permittees compliance status with the Receiving Water Limitations, Section III of the Order, including any proposed modifications to the WQMPs or the DAMP if the Receiving Water Limitations are not fully achieved.

C. The Co-Permittees shall be responsible for the submittal of all required information/materials needed to comply with this order in a timely manner to the Principal Permittee. A duly authorized representative of the Co-Permittee under penalty of perjury shall sign all such submittals.

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REPORTING SCHEDULE

All reports required by this Order shall be submitted to the Executive Officer in accordance with the following schedule:

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
I.A.2.a. & I.B.2.a.	Management Steering Committee meetings to discuss permit implementation	Held at least quarterly	Annually on Nov. 30th
I.A.2.b. & I.B. .2.b.	Permittee Technical Committee meetings to discuss permit implementation	Held at least 10 times each year	Annually on Nov. 30th
I.B.2.a. & XIII.D.	Co-Permittees Participate in Management and Technical Committee meetings to discuss permit implementation	Attend at least 3 out of 4 Management and 8 out of 10 Technical meetings each year	Annually on Nov. 30th
III.D.1.	Notify Regional Board if Section III.E. discharges from MS4s cause exceedance of Receiving Water Quality Objectives.	---	2 working days Oral or e-mail notice and 30 days written from time of becoming aware of the situation.
III.D.4.	Modify DAMP	---	90 days after approval by Exec. Officer
III.D.6.	Report discovery of exceedances from outside sources.	---	2 working days Oral or e-mail notice and 10 days written from time of becoming aware of the situation.
IV.A.	Revise existing Implementation Agreement.	6 Months	Nov. of the year following adoption.
IV.B.	Evaluate Urban Runoff Management structure and Implementation Agreement annually.	Annually on Nov. 30th	Annually on Nov. 30th
V.C.	Determine if Permittees have provided their staff authority to impose fines.	6 Months	Nov. of the year following adoption.
V.D.	Enact ordinances or other local regulatory mechanisms that include sanctions to ensure compliance	18 Months.	Nov. of the second year following adoption.
V.F.	Provide a report on the effectiveness of their Storm Water Ordinances and their enforcement, in prohibiting illegal discharges to the MS4s	12 Months	Nov. of the year following adoption.
V.G.	Legal Authority & Enforcement Strategy, Certification	18 months.	Nov. of the second year following adoption.
VI.A.	Eliminate or Permit illicit connections	60 days from receipt of notice.	Nov. of the year received notice.
VI.B.	Investigate Spills, Leaks, and/or illegal discharges.	Within 24 hours of receipt of notice.	Nov. of the year received notice.

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
VI.D.	Evaluate available BMPs & recommend any improvements needed.	18 Months.	Nov. of the second year following adoption.
VI.E.	Litter/Trash Control Ordinance review	18 Months.	Nov. of the second year following adoption.
VII.B.	Develop mechanism to address septic system failures	12 Months.	Nov. of the year following adoption.
VII. C.	Review current oversight programs for portable toilets to determine the need for any revision	12 Months.	Nov. of the year following adoption.
VIII. A. 1	Establish a procedure to ensure local permits for proposed construction sites and industrial facilities are conditioned upon proof of obtaining coverage under the applicable General Storm Water Permit(s)/ San Jacinto Watershed Construction Activities Permit	6 months	Nov. of the year following adoption.
VIII. A.8	Review planning procedures and CEQA processes	12 Months	Nov. of the year following adoption.
VIII. A.9	Incorporate watershed protection principles and policies into the General Plan	26 Months	Nov. of the third year following adoption
VIII.A.10	Review and revise, as necessary, grading/erosion control ordinances to reduce erosion.	16 Months	Nov. of the second year following adoption.
VIII.A.11	Listing of BMPs for Construction	18 Months.	Nov. of the second year following adoption.
VIII.B.	Develop WQMP	20 Months.	Nov. of the third year following adoption.
VIII.B.4.	In the absence of an approved WQMP, the structural BMPs for all new development and significant redevelopment shall be sized to comply with one of the numeric sizing criteria given in Section VIII.B.5.	January 1, 2005	Nov. 30, 2005
VIII.B.6.b.(1).	Waiver and justification document submittal.	Within 30 days of issuance of waiver.	Nov. of year granted waiver.
IX.	Revise the E/CS	12 Months.	Nov. of the year following adoption.
IX.	Develop and update criteria in E/CS for inspection of Construction, Industrial and Commercial facilities, including site information, priority, and inspection information	12 Months.	Nov. of the year following adoption.
IX.A.1.	Develop and update a construction site database, including site information, priority, and inspection information	12 Months.	Nov. of the year following adoption.
IX.A.1.	Include Section VIII.B.1. criteria sites in database.	13 Months.	Nov. of the year following adoption.

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
IX.A.2.	Inspect all inventoried construction sites	12 Months.	Nov. of the year following adoption.
IX.A.6.	Public agency staff and contract field operations staff adequately trained for Construction Sites inspections.	12 Months existing employees, 6 months new employees, and annually thereafter.	Annually on Nov. 30th
IX.A.7., IX.B.6., & IX.C.10.	Report Emergency Situations	---	24 hours Oral or e-mail notice and 10 days written from time of notice
IX.A.8., IX.B.7., & IX.C.11.	Report Non-Emergency Situations	---	2 working days Oral or e-mail notice and 10 days written from time of notice
IX.B.1.	Develop and update an industrial facilities database, including facility information, priority, and inspection information	18 Months and annually thereafter.	Nov. of the second year following adoption.
IX.B.12, & IX.C.15.	Public agency staff and contract field operations staff adequately trained for inspection of Industrial and Commercial Facilities.	18 Months existing employees, 6 months new employees, and annually thereafter.	Annually on Nov. 30th
IX.C.1.	Develop and update a commercial site database, including facility information, priority, and inspection information	18 Months.	Nov. of the third year following adoption.
IX.C.2.	Update the commercial site database to include additional categories of commercial facilities	24 Months.	Nov. of the third year following adoption.
IX.C.3.	Revise CAP and Develop restaurant inspections program, which includes runoff, grease blockage, and spill reduction aspects.	12 Months.	Nov. of the year following adoption.
X.A.	Submit Public Comments received in response to modifications to reports, plans, or schedules.	Annually	Annually on Nov. 30th
X.B.	Sponsor at least one Urban Runoff public outreach.	Annually	Annually on Nov. 30th
X. C.	Establish Public Education Committee	6 Months.	Nov. of the year following adoption.
X. D.	Determine the best method to provide educational and General Industrial Activities Storm Water Permit materials to businesses within their jurisdiction	18 months and begin implementation procedures within 24 months.	Nov. of the third year following adoption.
X.E.	Propose and implement a public awareness survey	24 months	Nov. 2007.

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
X. F.	BMP guidance for restaurants, automotive service centers, and gasoline service stations, developed by Public Education Committee	12 Months	Nov. of the second year of adoption.
X.G.	Develop public education materials including reporting hot line and web site.	12 Months	Nov. 30, 2003
X. H	BMP guidance for control of potential polluting activities not otherwise regulated	18 Months.	Nov. of the year following adoption.
XI.B.	Develop BMPs for fire fighting training & equipment testing.	18 Months	Nov. of the year following adoption.
XI.C.	Review Municipal Facilities Strategy and evaluate its applicability to municipal maintenance contracts, contract for field maintenance operations, and leases	Annually on August 1st	Nov. 30th
XI. D	Evaluate criteria for inspection and maintenance of MS4s.	6 months and Annually thereafter	Annually on Nov. 30th
XI.E.	Review opportunities to configure/reconfigure MS4s	20 months.	Nov. of the third year following adoption.
XI.F.	Develop Model Public Facility Maintenance Program for activities and drainage facilities.	12 months.	Nov. of the third year following adoption.
XI.G.	Implement program to clean out MS4s	12 Months	Nov. of the second year following adoption.
XI.H.	Failsafe Clean out Open Channel MS4s and Retention/Detention Basins schedule	November 1, 2004	Nov. 2005
XI.J.	Develop and distribute BMP guidance for public agency and contract field operations and maintenance staff	18 months	Nov. of the year following adoption.
XI.K.	Training provided on fertilizer and pesticide management and other pollution control measures	Annually (Staff attend @ least 3 out of 5).	Annually on Nov. 30th
XI.L.	Identify areas that are not subject to street sweeping due to lack of continuous curb and gutter, and evaluate their potential for impacting Urban Runoff quality.	Nov. 2004	Nov. 2004
XI.M.	Evaluate street/road sweeping frequency	Annually	Annually on Nov. 30th
XI.O.	Status report on flood control facilities in the Chino-Corona agricultural preserve area.	Annually	Annually on Nov. 30th
XII.B.	Comply with the requirements for municipal construction projects that may result in land disturbance greater than one acre.	March 10, 2003	Nov. of the year following adoption.
XIII.A.	Revise the DAMP	6 months after WQMP approval or Jan. 1, 2005	Nov. 2005.
XIII.B.	Evaluate the DAMP for additional revision.	Annually on August 1st	Nov. 30th
XV.A.5	Unless otherwise specified complete changes to plans or programs in this Order.	12 Months	Nov. of the year following adoption.

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
XV.B.	Annual Report/Fiscal Analysis	Annually	Nov. 30th
XVI.A.	Report of Waste Discharge	180 days before permit expires	April 27, 2007
Appendix 3 I.G.	Identify monitoring locations for interim monitoring.	6 Months	Nov. of the year following adoption.
Appendix 3 I.H, III.B. & III.C.	Revise CMP	12 Months	Nov. of the year following adoption.
Appendix 3. IV.B.	Summary, evaluation, and discussion of monitoring results and re-evaluate monitoring program priorities based on previous year's data	Annually, Nov.30th	Nov. 30th

Ordered by_____

Gerard J. Thibeault
Executive Officer
October 25, 2002

APPENDIX 4

GLOSSARY

ORDER NO. R8-2002-0011

APPENDIX 4

GLOSSARY

Annual Report - Pursuant to each NPDES MS4 permit issued by the Regional Board to the Permittees, there is a requirement that an Annual Report be filed with the Regional Board on or before each November 30th.

APN - Assessor's parcel number

Basin Plan - Water Quality Control Plan developed by the Regional Board for the Santa Ana River Watershed.

BAT [Best Available Technology] – BAT is the technology-based standard established by Congress in CWA section 402(p)(3)(A) for industrial dischargers of storm water. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source controls and structural treatment BMPs. For example, secondary treatment (or the removal of 85% suspended solids and BOD) is the BAT for suspended solid and BOD removal from a sewage treatment plant. BAT generally emphasizes treatment methods first and pollution prevention and source control BMPs secondarily.

The best economically achievable technology that will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants is determined in accordance with regulations issued by the USEPA Administrator. Factors relating to the assessment of BAT shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the permitting authority deems appropriate.

BCT [Best Conventional Technology] – BCT is the treatment techniques, processes and procedure innovations, and operating methods that eliminate or reduce chemical, physical, and biological pollutant constituents.

Beneficial Uses – The uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. "Beneficial Uses" that may be protected against 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. Existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law. [California Water Code Section 13050(f)].

Biological Integrity – Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5:55-68 as: "A

balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region." Also referred to as ecosystem health.

BMP [Best Management Practices] – Defined in 40 CFR 122.2 as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the U.S. 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. In the case of MS4 permits, BMPs are typically used in place of numeric effluent limits.

Caltrans - California Department of Transportation

CAP - Compliance Assistance Program developed and funded by the Permittees.

CEQA - California Environmental Quality Act (Section 21000 et seq. of the California Public Resources Code.

"cleaning" - The removal of litter or debris that can impact Receiving Waters.

CMP - Consolidated Program for Water Quality Monitoring

Conditions of Concern - Scour, erosion (sheet, rill and/or gully), aggradation (raising of a streambed from sediment deposition), changes in fluvial geomorphology, hydrology and changes in aquatic ecosystem.

Construction Activity Permits – Collectively, the General Construction Activity Storm Water Permit and the San Jacinto Watershed Construction Activities Permit.

"contamination" – As defined in the Porter-Cologne Water Quality Control Act, contamination is "an impairment of the quality of 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 U.S. are affected.

Co-Permittees - County of Riverside and the cities of Beaumont, Calimesa, Canyon Lake Corona Hemet, Lake Elsinore, Murrieta, Moreno Valley Norco, Perris, Riverside, and San Jacinto.

County - County of Riverside, legal entity

CWA - Federal Clean Water Act

DAMP [Drainage Area Management Plan] - The DAMP is a programmatic document developed by the Permittees and approved by the Executive Officer that outlines the major programs and policies that the Permittees individually and/or collectively implement to manage Urban Runoff in the Permit Area.

E/CS - Enforcement Compliance Strategy developed by the Permittees dated December 20, 2001.

"effluent limitations" – Limitations on the volume of each waste discharge and the quantity and concentrations of pollutants in the discharge. The limitations are designed to ensure that the discharge does not cause water quality objectives to be exceeded in the receiving water and does not adversely affect beneficial uses.

Effluent limitations are limitations of the quantity and concentrations of pollutants in a discharge. The limitations are designed to ensure that the discharge does not cause water quality objectives to be exceeded in the receiving water and does not adversely affect beneficial uses. In other words, an effluent limit is the maximum concentration of a pollutant that a discharge can contain. To meet effluent limitations, the effluent typically must undergo one or more forms of treatment to remove pollutants in order to lower the pollutant concentration below the limit. Effluent limits are typically numeric (e.g., 10 mg/l).

Emergency Situation – At a minimum, sewage spills that could impact water contact recreation, all sewage spills above 1,000 gallons, an oil spill that could impact wildlife, a hazardous material spill where residents are evacuated, all reportable quantities of hazardous waste spills as per 40CFR 117 and 302, and any incident reportable to the OES (1-800-852-7550).

Executive Officer - The Executive Officer of the Regional Board

General Construction Activity Storm Water Permit - State Board Order No. 99-08 DWQ (NPDES No. CAS000002)

General Dairy Permit - Regional Board Order No. 99-11 (NPDES No. CAG018001) for concentrated animal feeding operations

General Industrial Activities Storm Water Permit - State Board Order No. 97-03 DWQ (NPDES No. CAS000001)

General Storm Water Permits - General Industrial Activities Storm Water Permit and General Construction Activity Storm Water Permit.

GIS – Geographical Information Systems.

"hazardous material" – 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 the USEPA to be reported if a designated quantity of the material is spilled into the Waters of the U.S. or emitted into the environment.

" illegal discharge" – Illegal discharge means any disposal, either intentionally or unintentionally, of material or waste to land or MS4s that can pollute storm water or create a nuisance. The term illegal discharge includes any discharge to the MS4 that is

not composed entirely of storm water, except discharges pursuant to an NPDES permit, discharges that are identified in Section II. C. of this Order, and discharges authorized by the Executive Officer.

"illicit connection" - Illicit Connection means any connection to the storm drain system that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit connection includes all non storm-water discharges and connections except discharges pursuant to an NPDES permit, discharges that are identified in Section II, Discharge Limitations/Prohibitions, of this Order, and discharges authorized by the Executive Officer.

Impaired Waterbody – Section 303(b) of the CWA requires each of California's Regional Water Quality Control Boards 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. The 1998 water quality assessment listed a number of water bodies within the Permit Area as impaired pursuant to Section 303(d). In the Permit Area, these include: Canyon Lake (for nutrients and pathogens); Lake Elsinore (for nutrients, organic enrichment/low D.O., unknown toxicity and sedimentation); Lake Fulmor (for pathogens); Santa Ana River, Reach 3 (for nutrients, pathogens, salinity, TDS, and chlorides); and Santa Ana River, Reach 4 (for pathogens).

Implementation Agreement - NPDES Storm Water Discharge Permit - Implementation Agreement dated November 12, 1996 by and among the Permittees.

"impressions" - The most common measure is "gross impressions" that includes repetitions. This means if the same person sees an advertisement or hears a radio or sees a TV advertisement a thousand times, that will be counted as 1000 impressions. There are independent auditing agencies (e.g., Nielsen Rating) that perform this task and provide you with the numbers. In most cases, when you buy an advertisement in any media, they will provide you this number.

LA - Load allocations

"land disturbance" – The clearing, grading, excavation, stockpiling, or other construction activity that results in the possible mobilization of soils or other pollutants into MS4s. This specifically does not include routine maintenance activity to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. This also does not include emergency construction activities required to protect public health and safety. The Permittees should first confirm with Regional Board staff if they believe that a particular routine maintenance activity is exempt under this definition from any General Storm Water Permit or other Orders issued by this Regional Board.

Management Steering Committee - A committee to address Urban Runoff management policies for the Permit Area and coordinate the review and necessary revisions of the DAMP and Implementation Agreement.

MEP [Maximum Extent Practicable] – There is no statutory or regulatory definition for MEP. The CWA section 402(p)(3)(B)(iii) requires that MS4 permits "shall require controls to reduce the discharge of pollutants to the MEP, 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…" However, there has been several interpretations that have been provided including:

1. MEP means that when considering and choosing BMPs to address an identified pollution problem, the municipality is to consider the following: technical feasibility, effectiveness, compliance with regulatory standards, cost, and public acceptance. The BMP chosen must achieve greater or substantially the same pollution control benefit as identified in the manuals developed by the California Storm Water Quality Task Force (Proposed by Permittees).

2. 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. (Order R8-2001-10 Orange County MS4 Permit)

3. MEP is the technology-based standard established by Congress in CWA Section 402(p)(3)(B)(iii) that municipal dischargers of storm water (MS4s) 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 BMPs. MEP generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) <u>in combination</u> with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than BAT. A definition for MEP is not provided either in the statute or in the regulations. Instead the 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 Water Quality Management Plan. Their total collective and individual activities conducted pursuant to the Water Quality Management 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 system maintenance). In the absence of a proposal acceptable to the SARWQCB, the SARWQCB defines MEP.

4. In a memo dated February 11, 1993, entitled "Definition of Maximum Extent Practicable," Elizabeth Jennings, Senior Staff Counsel, SWRCB addressed the achievement of the MEP standard as follows:

   "*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. The major emphasis is on technical feasibility. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the cost would be prohibitive. In selecting BMPs to achieve the MEP standard, the following factors may be useful to consider:*

   a. *Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?*

b. *Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?*
c. *Public Acceptance: Does the BMP have public support?*
d. *Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?*
e. *Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc?*

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. If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive, it is likely that MEP has not been met. On the other hand, if a municipal discharger 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 derived, it would have met the standard. Where a choice may be made between two BMPs that should provide generally comparable effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs that would address a pollutant source, or to pick a BMP base solely on cost, which would be clearly less effective. In selecting BMPs the municipality must make a serious attempt to comply and practical solutions may not be lightly rejected. In any case, the burden would be on the municipal discharger to show compliance with its permit. After selecting a menu of BMPs, it is the responsibility of the discharger to ensure that all BMPs are implemented."

MS4 - [Municipal Separate Storm Sewer System] – An MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, natural drainage features or channels, modified natural channels, 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 designated and approved management agency under section 208 of the CWA that discharges to Waters of the U.S.; (ii) Designated or used for collecting of conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the POTW as defined at 40 CFR 122.2.

Historic and current developments make use of natural drainage patterns and features as conveyances for urban runoff. Urban streams used in this manner are part of the municipalities MS4 regardless of whether they are natural, man-made, or partially modified features. In these cases, the urban stream is both an MS4 and a receiving water.

Municipal Facilities Strategy - Each Permittee's plan to address potential impacts to Urban Runoff quality from its facilities and activities as required by Order No. 96-730.

New Development – The categories of development identified in subsections VIII.B.1.b. New developments do not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of a facility, nor do they include emergency

new developments required to protect public health and safety. Dischargers should confirm with Regional Board staff whether or not a particular routine maintenance activity is subject to this Order.

NOI [Notice of Intent] - A NOI is an application for coverage under either General Stormwater Permits or the San Jacinto Watershed Construction Activities Permit.

"non-point source" - Non-point source refers to diffuse, widespread sources of pollution. These sources may be large or small, but are generally numerous throughout a watershed. Non-point sources, include but are not limited to urban, agricultural or industrial area, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining, livestock grazing, as well as physical changes to stream channels, and habitat degradation. Non-point source pollution can occur year round any time rainfall, snowmelt, irrigation, or any other source of water runs over land or through the ground, picks up pollutants from these numerous, diffuse sources and deposits them into rivers, lakes and coastal waters or introduces them into ground water.

"non-storm water" – Non-storm water consists of all discharges to and from a storm water conveyance system that do not originate from precipitation events (i.e., all discharges from a conveyance system other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges and NPDES permitted discharges. An illicit discharge is defined at 40 CFR 122.26(b)(2) as any discharge to a MS4 that is not composed entirely of storm water except discharges pursuant to a separate NPDES permit and discharges resulting from emergency fire fighting activities.

NPDES [National Pollutant Discharge Elimination System] – Permits issued under Section 402(p) of the CWA for regulating discharge of pollutants to Waters of the U.S.

"nuisance" – As defined in the Porter-Cologne Water Quality Control Act a nuisance is "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."

"numeric effluent limitations" – A method by which "effluent limitations," see above, are prescribed for pollutants in waste discharge requirements using concentration based criteria to implement the federal NPDES regulations. When numeric effluent limits are met at the "end-of-pipe," the effluent discharge generally will not cause water quality standards to be exceeded in the receiving waters (i.e., water quality standards will also be met).

OES - Office of Emergency Services

Order - Order No. R8-2002-0011 (NPDES No. CAS618033)

Permit Area - The portion of the Santa Ana River Watershed that is within the County of Riverside and identified on Appendix 1 as "Urban Area" and those portions of

"Agriculture" and "Open Space", as identified on Appendix 1, that do convert to industrial, commercial, or residential use during the term of the Order

Permittees - Co-Permittees and the Principal Permittee

"person" or **"party"** – A person is defined as an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof. [40 CFR 122.2].

"point source" – 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 operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged.

"pollutant" – A pollutant is broadly defined as any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated.

Pollutants of Concern – A list of potential pollutants to be analyzed for in the Monitoring and Reporting Program. This list shall include: TSS, total inorganic nitrogen, total phosphorus, soluble reactive phosphorus, acute toxicity, fecal coliform, total coliform, pH, and chemicals/potential pollutants expected to be present on the project site. In developing this list, consideration should be given to the chemicals and potential pollutants available for storm water to pick-up or transport to Receiving Waters, all pollutants for which a waterbody within the Permit Area that has been listed as impaired under CWA Section 303(d)), the category of development and the type of pollutants associated with that development category.

"pollution" – As defined in the Porter-Cologne Water Quality Control Act, pollution is the alteration of the quality of the Waters of the U.S. by waste, to a degree that unreasonably affects either of the following: A) the waters for beneficial uses; or 2) facilities that serve these beneficial uses. Pollution may include contamination.

"pollution prevention" – Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control, treatment, or disposal.

"post-construction BMPs" – A subset of BMPs including source control and structural treatment BMPs which detain, retain, filter or educate to prevent the release of pollutants to surface waters during the final functional life of development.

POTW - Publicly owned treatment works

Preserve Area - Chino-Corona Agricultural Preserve Area

Principal Permittee - Riverside County Flood Control and Water Conservation District.

Public Education Committee - A committee to be established by the Permittees pursuant to Section X.C. of this Order to provide oversight and guidance for the implementation of the public education program.

Rainy Season – October 1 through May 31st of each year.

RCFC&WCD - Riverside County Flood Control and Water Conservation District

"receiving water(s)" – The Waters of the U.S. that includes surface and ground waters.

Receiving Water(s) - The receiving waters within the Permit Area

Receiving Water Limitations – Receiving Water Limitations are requirements included in this Order issued by the Regional Board to assure that the regulated discharges do not violate water quality standards established in the Basin Plan at the point of discharge to Waters of the U.S. Receiving Water Limitations are used to implement the requirement of CWA section 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet water quality standards.

Receiving Water Quality Objectives - Water quality objectives specified in the Basin Plan for Receiving Waters.

Region - Santa Ana River Watershed

Regional Board - California Regional Water Quality Control Board, Santa Ana Region

Riverside County - Territory within the geographical boundaries of the County.

ROWD - Report of Waste Discharge, Application No. CAS 618033

San Jacinto Watershed Construction Activities Permit - Regional Board Order No. 01-34, adopted January 19, 2001

"sediment" – Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human induced land disturbance activities) is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources and does not regulate naturally occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

SIC - Standard Industrial Code

Significant Redevelopment - defined in Section VIII.B.1.a.

"source control BMPs" – In general, activities or programs to educate the public or provide low cost non-physical solutions, as well as facility design or practices aimed to limit the contact between pollutant sources and stormwater or authorized non-storm water. Examples include: activity schedules, prohibitions of practices, street sweeping, facility maintenance, detection and elimination of illicit connections and illegal dumping, and other non-structural measures. Facility design examples include providing attached lids to trash containers, or roof or awning over material and trash storage areas to

prevent direct contact between water and pollutants. Additional examples are provided in Section 4 of Supplement A to the DAMP dated April 1996.

State Board - California Water Resources Control Board

"storm water" – Runoff from urban, open space, and agricultural areas consisting only of those discharges that originates from precipitation events. Storm water is that portion of precipitation that flows across a surface to the MS4 or receiving waters. Examples of this phenomenon include: the water that flows off a building's roof when it rains (runoff from an impervious surface); the water that flows into streams when snow on the ground begins to melt (runoff from a semi-pervious surface); and the water that flows from a vegetated surface when rainfall is in excess of the rate at which it can infiltrate into the underlying soil (runoff from a pervious surface). During precipitation events in urban areas, rain water picks up and transports pollutants through storm water conveyance systems, and ultimately to Waters of the U.S.

Storm Water Ordinance - The Storm Water/Urban Runoff Management and Discharge Control Ordinances and ordinances addressing grading and erosion control adopted by each of the Co-Permittees

"structural BMPs" – Physical facilities or controls which may include secondary containment, treatment measures, (e.g. first flush diversion, detention/retention basins, and oil/grease separators), run-off controls (e.g., grass swales, infiltration trenches/basins, etc.), and engineering and design modification of existing structures. Additional examples are provided in Section 4 of Supplement A to the Riverside County DAMP dated April 1996.

Subdivision Map Act - Section 65000 et seq. of the California Government Code

Supplement A - Supplement A to the DAMP that is entitled "New Development Guidelines" and the attachment thereto entitled "Selection and Design of Storm Water Quality Controls."

SWPPP - Storm Water Pollution Prevention Plan

TDS - Total dissolved solids.

Technical Committee - A Permittee staff committee to direct the development of the DAMP and direct the implementation of the overall Urban Runoff program as described in the ROWD.

TMDL [Total Maximum Daily Load] – TMDL is the maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under CWA Section 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

"toxicity" – Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

TSS - Total suspended solids.

Uncontaminated Pumped Groundwater - Groundwater that meets the surface water quality objectives specified in the Basin Plan to which it is proposed to be discharged.

Urban Runoff – Urban Runoff includes those discharges from residential, commercial, industrial, and construction areas within the Permit Area and excludes discharges from feedlots, dairies, farms, and open space. Urban Runoff discharges consist of storm water and non-storm water surface runoff from drainage sub-areas with various, often mixed, land uses within all of the hydrologic drainage areas that discharge into the Waters of the U. S. In addition to Urban Runoff, the MS4s regulated by this Order receive flows from agricultural activities, open space, state and federal properties and other non-urban land uses not under the control of the Permittees. The quality of the discharges from the MS4s 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.

The Permittees lack legal jurisdiction over storm water discharges into their respective MS4s from agricultural activities, California and federal facilities, utilities and special districts, Native American tribal lands, wastewater management agencies and other point and non-point source discharges otherwise permitted by or under the jurisdiction of 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 are beyond the ability of the Permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography.

USEPA - United States Environmental Protection Agency

"waste" – As defined in Water Code Section 13050(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.”

Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system that applies to solid and semi-solid waste that cannot be discharged directly or indirectly to waters of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, non-hazardous solid waste, and inert waste.

Waste Discharge Requirements – As defined in Section 13374 of the California Water Code, the term "waste discharge requirements” is the equivalent of the term "permits" as used in the Federal Water Pollution Control Act, as amended. The Regional Board

usually reserves reference to the term “permit” to Waste Discharge Requirements for discharges to surface Waters of the U.S.

Water Code - California Water Code

Waters of the U.S. – Waters of the U.S. can be broadly defined as navigable surface waters and all tributary surface waters to navigable surface waters. Groundwater is not considered to be a Waters of the U.S. As defined in 40 CFR 122.2, the Waters of the U.S. are defined as: (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 U.S. under this definition**:** (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the U.S. 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 CWA, the final authority regarding CWA jurisdiction remains with the USEPA.

"water quality objectives" – Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water [California Water Code Section 13050 (h)]. California’s water quality objectives are established by the State/Regional Water Boards in the Water Quality Control Plans.
As stated in the Porter-Cologne requirements for discharge (CWC 13263): "(Waste discharge) 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 objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241."

Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a Receiving Water and still generally ensure that the beneficial uses of the Receiving Water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne’s definition of pollution. A condition of <u>pollution</u> exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are the reason why all waste discharge requirements implementing the

federal NPDES regulations require compliance with water quality objectives. (Water quality objectives are also called water quality criteria in the CWA.)

"water quality standards" – are defined as the water quality goals of a waterbody (or a portion of the waterbody) designating beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.,) to be made of the water and the water quality objectives or criteria necessary to protect those uses.

"watershed" – That geographical area which drains to a specified point on a watercourse, usually a confluence of streams or rivers (also known as drainage area, catchments, or river basin).

WLA - Waste load allocations

WQMP – Water Quality Management Plan as discussed in Section VIII.B. of the Order.

APPENDIX 5

NOTICE OF INTENT AND NOTICE OF TERMINATION

ORDER NO. R8-2002-0011

Appendix 5

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – SANTA ANA REGION

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF THE RIVERSIDE COUNTY MUNICIPAL STORMWATER PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

ORDER No. R8-2002-0011 (NPDES No. CAS618033)

MARK ONLY ONE ITEM 1. New Construction 2. Reconstruction 3. Change of Information for WDID#

I. OWNER

Name | Contact Person

Mailing Address | Title

City | State | Zip | Phone ( ) –

II. CONTRACTOR INFORMATION

Name | Contact Person

Local Mailing Address | Title

City | State | Zip | Phone ( ) –

III. SITE INFORMATION

A. Project Title | Site Address

City | State | Zip | Phone ( ) –

B. Construction commencement date: (Month / Day / Year)

C. Projected construction completion date: (Month / Day / Year)

D. Type of Work: Utility Flood Control Transportation Other (Specify)

Description of Work: _____

E. Total size of site: _____ Acres

IV. RECEIVING WATER INFORMATION

A. Does the storm water runoff from the construction site discharge to (Check all that apply):

1. Indirectly to waters of the U.S.
2. Storm drain system - Enter owner's name:_____
3. Directly to waters of U.S. (e.g., river, lake, creek, stream, bay, ocean, etc.)

V. IMPLEMENTATION OF NPDES PERMIT REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (mark one)

A SWPPP has been prepared for this facility and is available for review

A SWPPP will be prepared and ready for review by (date): ___/___/___

B. MONITORING PROGRAM (MP) (mark one)

A MP has been prepared for this facility and is available for review

A MP will be prepared and ready for review by (date): ___/___/___

VI. CERTIFICATIONS

"I certify under penalty of law that this document and all attachments were prepared under my direction and 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 or imprisonment. In addition, I certify that Section XII of Order No. R8-2002-0011, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with."

Printed Name: **Title:**

Signature: **Date:**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – SANTA ANA REGION

NOTICE OF TERMINATION

OF COVERAGE UNDER THE RIVERSIDE COUNTY MUNICIPAL STORMWATER PERMIT
FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY

ORDER No. R8-2002-0011 (NPDES No. CAS618033)

I. OWNER

Name | Contact Person

Mailing Address | Title

City | State | Zip | Phone ( ) –

II. SITE INFORMATION

A. Project Title | Site Address

City | State | Zip | Phone ( ) –

B. Contractor Name | Contact Person

Local Mailing Address | Title

City | State | Zip | Phone ( ) –

III. BASIS OF TERMINATION

__ 1. The construction project is completed and the following conditions have been met.
- ✓ All elements of the Storm Water Pollution Prevention Plan have been completed.
- ✓ Construction materials and waste have been disposed of properly.
- ✓ The site is in compliance with all local storm water management requirements.
- ✓ A post-construction storm water operation and management plan is in place.

__ 2. Construction activities have been suspended, either temporarily ____ or indefinitely ___ and the following conditions have been met.
- ✓ All elements of the Storm Water Pollution Prevention Plan have been completed.
- ✓ Construction materials and waste have been disposed of properly.
- ✓ An effective combination of erosion and sediment control is in place for all denuded areas and other areas of potential erosion.
- ✓ The site is in compliance with all local storm water management requirements.

Date of suspension ____ / ____ / ____ Expected start up date ____ / ____ / ____

IV. CERTIFICATION

I certify under penalty of law that all storm water discharges associated with construction activity from the identified site that are authorized by NPDES General Permit No. CAS000002 have been eliminated or that I am no longer the owner of the site. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge storm water associated with construction activity under the General Permit, and that discharging pollutants in storm water associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this Notice of Termination does not release an owner of liability for any violation of the General Permit or the Clean Water Act.

Printed Name: **Title:**

Signature: **Date:**

California Regional Water Quality Control Board

Santa Ana Region

3737 Main Street, Suite 500

Riverside, CA 92501- 3348

FACT SHEET
October 25, 2002

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, Urban Runoff Management Program, Order No. R8-2002-0011 (NPDES No. CAS 618033)

I. INTRODUCTION

A. PROJECT

The attached pages contain information concerning an application for renewal of waste discharge requirements and a National Pollutant Discharge Elimination System (NPDES) permit, Order No. R8-2002-0011, NPDES No. CAS 618033, which prescribes waste discharge requirements for Urban Runoff from the cities and the unincorporated areas in Riverside County within the jurisdiction of the Regional Board. Specifically, Order No. R8-2002-0011 regulates discharges of Urban Runoff from the "Permit Area" as defined in the Order and shown in Appendix 1.

Urban Runoff includes those discharges from residential, commercial, industrial, and construction areas within the Permit Area and excludes discharges from feedlots, dairies, farms, and open space. Urban Runoff discharges consist of storm water and non-storm water surface runoff from drainage sub-areas with various, often mixed, land uses within all the hydrologic drainage areas that discharge into the 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 increases, riparian habitats and wetland habitats decrease, the frequency and severity of flooding increase, and pollutant loading increases. Most of these impacts occur due to human activities that occur during and/or after urbanization. The pollutants and hydrologic changes can cause declines in aquatic resources, cause toxicity to marine organisms, and impact human health and the environment. Based on the procedures in Section D of the RCFC&WCD Hydrology Manual, it is feasible that, in semi-arid regions, development may result in the creation of a net increase in absorption.

On August 30, 2000, the Riverside County Flood Control and Water Conservation District (hereinafter referred to as "RCFC&WCD" or "Principal Permittee" as context

indicates), 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 (hereinafter with the County, collectively referred to as the "Co-Permittees" and collectively with the Principal Permitee, the "Permittees"), jointly submitted a National Pollutant Discharge Elimination System (NPDES) Application No. CAS 618033, a Report of Waste Discharge (the "ROWD"), to renew the MS4 NPDES permit for the Santa Ana River Watershed (the "Region") within Riverside County (the "Order") NPDES permit dealing with urban runoff (hereinafter "Urban Runoff" as defined and qualified in Findings 13 and 14) in the "Permit Area" as shown in Appendix 1.

B. PROJECT AREA

The area shown on Appendix 1 contains 1,293 square miles (or 17.7% of the 7,300 square miles within Riverside County) and includes 11 of the 24 municipalities within Riverside County. The California Department of Finance estimates that as of January 1, 2002, the population of Riverside County is 1,644,341 of which 759,877 persons reside within the 11 municipalities and an additional 338,630 persons reside in the unincorporated area that is within the area shown on Appendix 1 (or a total of 1,098,507 persons or 66.8% of Riverside County's population). Five of the municipalities (Beaumont, Calimesa, Canyon Lake, Norco, and San Jacinto) have populations of 25,000 or less; three municipalities (Hemet, Lake Elsinore, and Perris) have populations between 25,001 and 62,000, Corona has a population of 133,966, Moreno Valley's population is 146,435 and Riverside has 269,402 residents. [Population figures for the city of Murrieta have been omitted because only 375 acres (2%) of the City's Land Area is within the area shown on Appendix 1. (See Finding No. 2.)] Of the total territory within the area shown on Appendix 1, 346.7 square miles are within the 11 incorporated areas and 944.6 square miles are unincorporated. General land uses within the 1,293.3 square miles comprising the area shown on Appendix 1 are identified, based on Riverside County Assessor's Roll for Fiscal Year 2001-2002, as follows: 109.3 square miles are used or zoned for commercial/industrial purposes (8.5%), 198.7 square miles for residential purposes (15.4%), 70.1 square miles are utilized for improved roadways (including roadways owned by Caltrans) (5.4%), 753.9 square miles are vacant or utilized for open space (58.3%), and 161.3 square miles are used for agricultural purposes (12.5%). The federal government owns 310.7 square miles (24%) of the territory within the area shown on Appendix 1.

Less than one fifth (1/5) of the entire acreage within Riverside County drains into water bodies within the Permit Area. The Permit Area includes the "Urban Area" as shown in Appendix 1 and those portions of "Agriculture" and "Open Space" as shown on Appendix 1 that do convert to industrial, commercial or residential use during the term of this Order. The Permit Area is delineated by the San Bernardino-Riverside County boundary line on the north and northwest, the Orange Riverside County boundary line on the west, the Santa Ana-San Diego Regional Board boundary line on the south, and the Santa Ana Colorado River Basin Regional Board boundary line on the east. Sixty-seven percent of Riverside County's population resides within the Regional Board's jurisdiction. The San Diego and the Colorado River Basin Regional Water Quality Control Boards regulate Urban Runoff from those portions of Riverside County outside of the Permit Area shown in Appendix 1.

C. CLEAN WATER ACT REQUIREMENTS

The federal Clean Water Act (the "CWA") 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 waters of the nation (the "Waters of the U. S."). 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.

The National Urban Runoff Program (NURP) final report to the Congress (USEPA, 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 runoff. Pursuant to these amendments, the Santa Ana Regional Board began regulating municipal storm water runoff in 1990.

II. REGULATORY BACKGROUND AND CLEAN WATER REQUIREMENTS

Recent studies [1] conducted in the Southern California area have established storm water runoff from urban areas as significant sources of pollutants in surface waters in Southern California. The Santa Ana River is impacted by agricultural and urban runoff as it flows through the San Bernardino County and Riverside County areas prior to flowing through Orange County and into the Pacific Ocean. If not properly controlled, urban runoff could be a significant source of pollutants in the 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.

The 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 MS4s and industrial facilities, including construction sites, to obtain NPDES permits for storm water runoff from their facilities. On November 16, 1990, the USEPA promulgated the final Phase I storm water regulations. The storm water regulations are contained in 40 CFR Parts 122, 123 and 124.

On July 13, 1990, the Regional Board issued Order No. 90-104 to the Permittees (first term permit). In 1996, the Regional Board adopted Order No. 96-30 (second term permit).

In 2001, 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

[1] 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. Southern California Coastal Water Research Project (1992), Surface Runoff to the Southern California Bight.

the incorporated cities will continue as the Co-Permittees. On January 19, 2001, the Regional Board adopted Order No. 01-34, NPDES No. CAG 618005 Watershed-wide Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with New Developments in the San Jacinto Watershed. On March 2, 2001, Order No. 96-30, NPDES No. CAS618033, was administratively extended in accordance with Title 23, Division 3, Chapter 9, §2235.4 of the California Code of Regulations.

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Table 1[2].

Pollutant Sources and Impacts of a Number of Pollutants On Waters of the U.S.

Pollutants	Sources	Effects and Trends
Toxins (e.g., biocides, PCBs, trace metals, heavy metals)	Industrial and municipal wastewater; 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	The use of legacy pesticides (DDT, chlordane, dieldrin,…) has been banned or restricted; 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, and alter food chains supporting fisheries. While organic waste loading has decreased, nutrient loading has increased (NRC, 1993a, 2000a).
Petroleum products (oil, grease, petroleum hydrocarbons, PAHs)	Urban runoff and atmospheric deposition from land activities; accidental spills; oil & gas production activities; natural seepage; and PAHs from internal combustion engines	Petroleum hydrocarbons can affect bottom organisms and larvae; spills affect birds, mammals and aquatic life. While oil pollution from accidental spills, and production activities has decreased, diffuse inputs from land-based activities have not (NRC, 1985).
Radioactive isotopes	Atmospheric fallout, industrial and military activities	Bioaccumulation may pose human health risks where contamination is heavy.
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.
Plastics and other debris	Boats, fishing nets, containers, trash, urban runoff	Entangles aquatic life or is ingested; degrades, lake shores and wetland 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 run off from impervious surfaces	Kills some temperature-sensitive species; and displaces others.
Pathogens (bacteria, protozoa, viruses)	Sewage, urban runoff, livestock, wildlife, and discharges from boats.	Pose health risks to swimmers and consumers of aquatic life. Sanitation has improved, but standards have been raised (NRC 1999a).
Alien species	Fishery stocking, aquarists	Displace native species, introduce new diseases; growing worldwide problem (NRC 1996).

[2] Adapted from "Marine Pollution in the United States" prepared for the Pew Oceans Commission, 2001.

The area-wide NPDES permit for the Permit Area 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 CWA 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 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 vs. Browner, 191 F.3d 1159, 1164 (9th Cir. 1999).

III. EXCLUSIONS TO THE PERMITTED AREA

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 application. These include the following areas and activities:

- Federal lands and state properties, including, but not limited to, military bases, national forests, hospitals, colleges and universities, and highways;
- Native American tribal lands;

- Open space and rural (non-urbanized) areas;
- Agricultural lands; and
- Utilities and special districts.

These areas in the Permit Area for which coverage under a municipal stormwater NPDES permit is excluded, are shown in Appendix I (Western Riverside County NPDES Permit Area).

IV. BENEFICIAL USES

Stormwater flows which are discharged to MS4s in the Permit Area are tributary to various water bodies (inland surface streams, 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, water contact recreation, non-contact water recreation, and sportfishing, warm freshwater habitat, cold freshwater habitat, preservation of biological habitats of special significance, wildlife habitat and preservation of rare, threatened or endangered species. The ultimate goal of this Order is to protect the beneficial uses and quality of the Receiving Waters.

To protect the beneficial uses of the Receiving Waters, the pollutants from all sources, including Urban Runoff, need to be controlled. Recognizing this, and the fact that Urban Runoff contains pollutants, an area-wide MS4 permit is the most effective way to develop and implement a comprehensive Urban Runoff management program in a timely manner. This area-wide MS4 permit contains requirements with time schedules that will allow the Permittees to continue to address water quality problems caused by Urban Runoff through their management programs to reduce pollutants in storm water discharges to the MEP[See Appendix 4, Glossary].

V. WATERSHED MANAGEMENT IN THE UPPER SANTA ANA RIVER BASIN

A. Management Approach

To regulate and control Urban Runoff from the Permit Area to the MS4s, an area-wide approach is essential and a holistic approach is needed to efficiently manage the water resources of the Region. The entire MS4 is not controlled by a single entity; the RCFC&WCD, the County of Riverside, several cities, the State Department of Transportation (Caltrans), and the U.S. Army Corps of Engineers, in addition to other smaller entities, manage the MS4s. In addition to the cities, the County of Riverside and the RCFC&WCD, there are a number of other significant contributors of Urban Runoff to these MS4s. These include: large institutions such as the State university system, prisons, schools, hospitals, etc.; federal facilities such as military sites, etc.; State agencies, such as Caltrans; water and wastewater management agencies such as Eastern and Western Municipal Water District; the National Forest Service and State parks. The State Board has issued a separate NPDES permit to Caltrans. In addition, Caltrans, and the other contributors identified, are not under the jurisdiction of the Permittees. The management and control of the entire MS4 cannot be effectively carried out without the cooperation and efforts of all these entities. Also, it would not be

meaningful to issue a separate MS4 permit to each of the entities within the Permit Area whose land/facilities drain into the MS4s operated by the Permittees. The Regional Board has concluded that the best management option for the Riverside County area is to issue an area-wide Urban Runoff permit to the Permittees.

Although, the Urban Runoff from the Permit Area drains into Orange County, urban runoff from Orange County areas are regulated under NPDES No. CAS 618030. Some areas within Riverside County are within the Colorado River Basin and San Diego Regional Boards' jurisdictions. Permit requirements for storm water runoff from the drainage areas of Riverside County within the jurisdiction of the San Diego and Colorado River Basin Regional Boards are addressed by those Regional Boards.

In developing Urban Runoff management and monitoring programs, consultation/coordination with other drainage management entities and other Regional Boards is essential. Common programs, reports, implementation schedules and efforts are desirable and will be utilized to the MEP.

Cooperation and coordination among all the stakeholders are essential for efficient and economical management of the watershed. It is also critical to manage non-point sources at a level consistent with the management of Urban Runoff in a watershed in Order to successfully prevent or remedy water quality impairment. Regional Board staff will facilitate coordination of monitoring and management programs among the various stakeholders.

An integrated watershed management approach is consistent with the Strategic Plan and Initiatives for the State and Regional Boards. A watershed wide approach is also necessary for implementation of the load and waste load allocations to be developed under the TMDL process. The Permittees and all the affected entities are 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.

B. SUB-WATERSHEDS AND MAJOR CHALLENGES

The Santa Ana River watershed is the major watershed within this Region. This watershed is divided into three sub-watersheds: the Lower Santa Ana, Upper Santa Ana, and San Jacinto.

1. The lower Santa Ana River sub-watershed (downstream from Prado Basin) includes the north half of Orange County. The Upper Santa Ana River sub-watershed includes the southwestern corner of San Bernardino County and the northwestern corner of Riverside County. The San Jacinto sub-watershed includes the northwest corner of Riverside County south of the Upper Santa Ana River sub-watershed within this Region.

   Generally, the San Bernardino County drainage areas drain to the Riverside County drainage areas, and Riverside County drainage areas discharge to Orange County through Prado Dam on the Santa Ana River. Most of the flow in the Santa Ana River is recharged into the ground water in Orange County but infrequently some of the flow may be discharged to the Pacific Ocean as a result of heavy storm events.

   Water from rainfall and snow melt runoff, and surfacing ground water from various areas either discharge directly to the Santa Ana River or to watercourses tributary to the Santa Ana River. Other major rivers in the Permit Area include the San Jacinto River and Temescal Creek. The San Jacinto Mountain areas drain into the San Jacinto River, which discharges into Canyon Lake and then to Lake Elsinore. Any overflow from Lake Elsinore is tributary to Temescal Creek, which flows into the Santa Ana River at the Prado Flood Control Basin. Overflow from Lake Elsinore occurs infrequently, only once every 12 to 15 years.

2. Upper Santa Ana River Sub-watershed:

   a. Reach 3 of the Santa Ana River (Prado Dam to Mission Boulevard in Riverside): The pollutants of concern for Reach 3 are nutrients, pathogens, salinity, total dissolved solids and chlorides. However, the Board now recognizes that Reach 3 of the Santa Ana River is meeting the standards for nutrients, salinity, TDS and chlorides and has requested the USEPA that this Reach be de-listed for these constituents. Reach 3 of the Santa Ana River has been posted by Riverside County, as it consists largely of POTW effluent, indicating that it is not suitable for body contact recreation due to microbial contamination. On March 23, 2000, the Executive Officer issued a request under Section 13267 of the CWC to the County and the cities that discharge urban runoff into this segment of the River to start an investigation of the microbial contamination of the River. The other problems associated with this segment of the River are addressed through the Regional Board's dairy program and TDS/nitrogen control programs.

   b. Reach 4 of the Santa Ana River: Reach 4 of the Santa Ana River is the portion of the River from Mission Boulevard bridge in Riverside to the San Jacinto fault (Bunker Hill Dike) in San Bernardino. Reach 4 is also listed in the CWA Section 303 (d) as an impaired water body. Most of Reach 4 of the River is under the

San Bernardino County area. The pollutants of concern for Reach 4 are pathogens.

c. San Jacinto Sub-watershed: Canyon Lake and Lake Elsinore are in this watershed and are listed on the 303(d) list for nutrients/pathogens (Canyon Lake) and nutrients, sediment, and unknown toxicity (Lake Elsinore). TMDLs are being developed for these impaired waterbodies. In the interim, the Regional Board adopted a separate watershed-wide construction activity storm water permit to regulate construction activities in this area. This permit may be reopened to include TMDL requirements.

C. *CWA SECTION 303(d) LIST AND TMDLS:*

Pursuant to Section 303(b) of the CWA, the 1998 water quality assessment conducted by the Regional Board listed a number of water bodies within the Region under Section 303(d) of the CWA as impaired water bodies. These are water bodies where the designated beneficial uses are not met and the water quality objectives are being violated. The sources of the impairments include POTW discharges, and runoff from agricultural, open space and urban land uses. The impaired water bodies in Riverside 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 are being developed for all pollutants identified in Table 2. The Permittees shall revise their DAMP, at the direction of the Executive Officer, to incorporate program implementation amendments so as to comply with regional, watershed specific requirements, and/or waste load allocations developed and approved pursuant to the process for the designation and implementation of Total Maximum Daily Loads (TMDLs) for impaired water bodies.

Table 2

CWA Section 303(d) Listed Waterbodies, 1998 List

WATER BODY	*HYDRO UNIT*	*POLLUTANT/ STRESSOR*	*SOURCE*	*PRIORITY*	*SIZE AFFECTED*
Canyon Lake	802.120	Nutrients Pathogens	Nonpoint Source Nonpoint Source	Medium Medium	600 Acres 600 Acres
Lake Elsinore	802.310	Nutrients Org. enrichment /low D.O. Sediment / Siltation Unknown Toxicity	Unknown Nonpoint Source Unknown Nonpoint Source Urban Runoff and Storm Drains Unknown Nonpoint Source	Medium Medium Medium Medium	3300 Acres 3300 Acres 3300 Acres 3300 Acres
Lake Fulmor	802.210	Pathogens	Unknown Nonpoint Source	Low	9 Acres
Santa Ana River, Reach 3	801.200	Nutrients Pathogens Salinity/TDS/Chlorides	Dairies Dairies Dairies	Medium Medium Medium	3 Miles 3 Miles 3 Miles
Santa Ana River, Reach 4	801.120	Pathogens	Nonpoint Source	Low	12 Miles

VI. FIRST AND SECOND TERM PERMITS: STORM WATER POLLUTION CONTROL PROGRAMS AND POLICIES

Prior to USEPA's promulgation of the final regulations implementing the storm water requirements of the 1987 CWA amendments, the counties of Orange, Riverside and San Bernardino requested an area-wide NPDES permits for storm water runoff. On July 13, 1990, the Regional Board issued Order No. 90-104 to the Permittees (first term permit). In 1996, the Regional Board adopted Order No. 96-30 (second term permit). First and second term permits included the following requirements:

1. Prohibited non-storm water discharges to the MS4s with certain exceptions.
2. Required the municipalities to develop and implement a DAMP to reduce pollutants in Urban Runoff to the MEP.
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 Ordinances.
6. Required monitoring of dry weather flows, storm flows, and receiving water quality, and program assessment.

During the first term permit, the Permittees developed a DAMP which was approved by the Executive Officer on January 18, 1994. The DAMP included five BMP groups: environmental education activities, solid waste activities, road drainage system operations and maintenance, regulatory and enforcement activities, and structural controls. The DAMP will be revised to include program components developed during the term of the 1996 Permit and to address requirements of this Order. The Permittees also indicated that the monitoring program would be revised and incorporated into the revised DAMP.

The RCFC&WCD performs water quality monitoring activities in support of three separate area-wide NPDES MS4 Permits (Santa Ana, San Diego and Colorado River basins) under the Consolidated Monitoring Program (CMP). Water samples and/or sediment samples have been collected at a total of 74 locations over the last nine years. These 74 locations are comprised of 45 storm drain outfalls, 12 receiving water, 15 sediment, and 2 special interest sampling locations. The August 30, 2000, ROWD indicated that in order to assess long-term trends and BMP effectiveness they would need more data points, with at least 5 samples (of similar types) obtained for many years. The ROWD indicated that the CMP would have to be revised. In the future, these monitoring stations and monitoring will be 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 Urban Runoff management program included identification and elimination of illegal discharges, illicit connections, and establishment of adequate legal authority to control pollutants in storm water discharges. Most of the Permittees have completed a survey of their MS4s 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:

1. During the term of the 1996 Permit, the Permittees have operated under an Implementation Agreement that sets forth the responsibilities of the Permittees as defined in the 1996 Permit. The Permittees have adopted Storm Water Ordinances regarding the management of Urban Runoff. The Storm Water Ordinances provide the Permittees with the legal authority to implement the requirements of the 1996 Permit and the key regulatory requirements contained in 40 CFR Section 122.26(d)(2)(I)(A-F).
2. The Permittees have participated in the CMP.
3. The Permittees administered area-wide programs including: hazardous materials emergency response, household hazardous waste collection, industrial/commercial compliance assistance program and public education and outreach. Some of these programs were coordinated with Caltrans and local agencies.
4. A Municipal Facilities Strategy was established, a New Development Guideline was developed, pet waste brochure, BMP brochure for horse owners, BMP brochure for pool discharges and a general outreach brochure for residents that hire contractors were developed.
5. A Technical Advisory Committee for overall program development and implementation was established.
6. Program Review: A number of existing programs were reviewed to determine their effectiveness in combating urban runoff pollution and to recommend alternatives and or improvements, including public agency activities and facilities, illegal discharges and illicit connections to the MS4 systems, and existing monitoring programs.
7. 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 industrial dischargers were notified of the storm water regulatory requirements. For a number of unregulated activities, BMP guidances were developed and a toll free hotline was established for reporting any suspected water quality problems.
8. Public Agency Training: Training was provided to public agency employees to implement New Development Guidelines and Public Works BMPs.
9. Related Activities: Modified MS4s by channel stabilization and creation of sediment basins; eliminated or permitted and documented illicit connections to the MS4s.

An accurate and quantifiable measurement of the impact of the above stated Urban Runoff management programs is difficult, due to 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 Urban Runoff 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, the amount of used oil collected, and the amount of debris removed by the debris boom, etc.

The water quality monitoring data could not be used to indicate any discernible trends or significant changes. It is expected that continuation of these programs and policies will reduce or control pollutants in Urban Runoff.

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.

VII. FUTURE DIRECTION/2000 ROWD

The ROWD (2000 ROWD) included an overview of the programs and policies the Permittees are proposing to implement during the third term permit. One of the proposed activities is to revise the 1993 DAMP. The 2000 ROWD specified that the revised DAMP will be the principal guidance document for Urban Runoff management programs in the Permit Area. The suggested outline for the revised DAMP include the following major components:

1. Continues a framework for the program management activities and DAMP update.
2. Continues to provide the legal authority to control discharges to the MS4s.
3. Includes a description of land use and population characteristics.
4. Improves current BMPs to achieve further reduction in pollutant loading to the MS4s.
5. Identifies TMDL concerns and an implementation schedule and other tools for addressing those concerns.
6. Identifies pollutants of concern in the regional water bodies.
7. Includes programs and policies to increase public education processes and to seek public support for Urban Runoff pollution prevention BMPs.
8. Continue with Management Steering Committee and other technical/advisory committees.
9. Includes sections on construction sites, development planning, industrial and commercial sources, and public education and outreach.
10. Includes programs and policies to eliminate illegal discharges and illicit connections to the MS4s.
11. Includes a continued and revised monitoring program for Urban Runoff.
12. 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 owned and/or controlled by the Permittees.

VIII. PERMIT REQUIREMENTS AND PROVISIONS

The legislative history of storm water statutes (1987 CWA Amendments), USEPA regulations (40CFR Parts 122, 123, and 124), and clarifications issued by the State 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 runoff. Due to the economic and technical infeasibility of full-scale end-of-pipe treatments and the complexity of urban 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 MEP 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 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 ROWD included a discussion of the current status of Riverside County's Urban Runoff management program and the proposed programs and policies for the next five years (third term permit). This Order incorporates these documents and specifies performance commitments for specific elements of the Permittees Urban Runoff management program.

This Order recognizes the progress made by the Permittees during the first and second term permits in implementing the storm water regulations. The Order 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 essential components of the Urban Runoff Management Program, as established by federal regulations [40 CFR 122.26(d)] are: (i) Adequate Legal Authority, (ii) Fiscal Resources, (iii) Storm Water Quality Management Program (SQMP) - (Public Information and Participation Program, Industrial/Commercial Facilities Program, Development Planning Program, Development Construction Program, Public Agency Activities Program, Illicit Connection and Illicit Discharges Elimination Program), and (iv) Monitoring and Reporting Program. The major sections of the requirements in this Order include: I. Responsibilities; II. Discharge Limitations/Prohibitions; III. Receiving Water Limitations; IV. Implementation Agreement; V. Legal Authority/Enforcement; VI. Illegal/Illicit Connections/Illegal Discharges; Litter, Debris and Trash Control; VII. Sewage Spills, Infiltration into MS4 Systems from Leaking Sanitary Sewer Lines, Septic System Failures, and Portable Toilet Discharges; VIII. New Development (including significant re-development); IX. Municipal Inspection Program; X. Public Education and Outreach; XI. Municipal Facilities Programs and Policies/Activities; XII. Municipal Construction Projects/Activities; XIII. Program Management/Damp Review; XIV. Monitoring and Reporting Requirements; XV. Provisions; XVI. Permit Expiration and Renewal.
These programs and policies are intended to improve urban storm water quality and protect the beneficial uses of receiving waters of the region.

A. RESPONSIBILITIES

The responsibilities of the Principal Permittee is to coordinate the overall Urban Runoff management program and the Co-Permittees are responsible for managing the Urban Runoff Program within their jurisdictions as detailed in the ROWD and Order No. 96-30 and 90-104.

B. 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 is a significant source of pollutants, a separate NPDES permit or coverage under the Regional Board's De Minimus permit will be required.

C. RECEIVING WATER LIMITATIONS

Receiving water limitations are included to ensure that discharges of Urban Runoff 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 USEPA and State Board guidance and recognizes the complexity of Urban Runoff management.

This Order requires the Permittees to meet water quality standards in Receiving Waters in accordance with USEPA 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 process.

D. IMPLEMENTATION AGREEMENT

The existing Implementation Agreement needs to be revised to include the cities that were not signatories to this Agreement. This section requires that a copy of the signature page and any revisions to the Agreement shall be included in the Annual Report.

E. LEGAL AUTHORITY/ENFORCEMENT

Each Permittee has 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 or to the Regional Board for enforcement under the State Water Code or the CWA. In order to eliminate unauthorized, non-storm water discharges, reduce the amount of pollutants commingling with Urban Runoff and thereby protect water quality, an additional level of enforcement is required between Notices of Violation and District Attorney referrals. Therefore, within 18 months of the Order's adoption, the Permittees are required to establish the authority and resources to administer either civil or criminal fines and/or penalties for violations of their Storm Water Ordinances. 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.

F. Illicit Connections/Illegal Discharges; Litter, Debris and Trash Control;

Most of 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 MS4s do not become a source of pollutants in Receiving Waters.

G. Sewage Spills, Infiltration into MS4 Systems from Leaking Sanitary Sewer Lines, Septic System Failures, and Portable Toilet Discharges;

In recent years, sewage spills/leaks into MS4s that discharge into Waters of the U.S. have become one of the leading causes of beneficial use impairment. 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 prevent failure of these septic systems from causing or contributing to pollution of Receiving Waters. The Permittees shall also review their local oversight program for the placement and maintenance of portable toilets to determine the need for any revision.

H. New Development (including Significant Redevelopment);

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 maintaining the beneficial uses of Receiving Waters. To accomplish this goal, the Permittees have the option of using a number of methodologies. The Permittees/project proponents may propose BMPs based on a watershed approach, establish other innovative and proven alternatives to address Urban Runoff pollution. Numeric sizing criteria for controls at New and Significant Redevelopment sites are specified in this Order. Any proposed regional or watershed-wide (or sub-watershed) pollution control measure should afford water quality protection equivalent to or better than that from the prescribed numeric

sizing criteria. If a set of measures acceptable to the Executive Officer is not developed and approved by January 1, 2005, the Permittees are required to use the numeric sizing criteria specified in the Order. The numeric criteria are identical to the one used by the San Diego Regional Board in its MS4 permit for permittees within the San Diego County area (Order No. 2001-01).

I. Municipal Inspection Program;

Co-Permittee inspections of construction, industrial, and commercial activities within their jurisdiction will be conducted, in order to control the loading of pollutants entering the MS4. The Co-Permittees will inventory facilities and sites in the above categories, prioritize these facilities based on threat to water quality, 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. Chapter four of the Enforcement/Compliance Strategy (the "E/CS") proposes a prioritization scheme and response outline.

J. Public Education and Outreach;

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 programs 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, have established a storm water pollution prevention hotline, started an advertising and educational campaign, and distributed 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.

K. Municipal Facilities Programs and Policies/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 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 their MS4s free of waste materials to control pollutants in Urban Runoff flowing through these systems. This Order requires the Permittees to re-evaluate their MS4s annually to see if additional BMPs are needed to ensure protection of Receiving Water quality.

L. Municipal Construction Projects/Activities;

This section addresses the requirements for the construction projects by the Permittees themselves.

M. Program Management/Damp Review;

The DAMP is a management document that needs to be updated with the new requirements of this Order.

N. Monitoring and Reporting Requirements;

During the first term permit and part of the second term permit, the Permittees conducted monitoring of the storm water flows, Receiving Water quality, and sediment quality. The Riverside County monitoring programs, as well as other monitoring programs nationwide, have shown 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 are a number of pollutants in urban runoff. Only in a few cases a definite link between pollutants in urban runoff and beneficial use impairments has been established.

Currently the Permittees are cooperating with the Regional Board in the development and implementation of appropriate monitoring programs to support the development of the Canyon Lake and Lake Elsinore TMDLs. This monitoring program includes sampling stormwater runoff at a variety of sites located throughout the watershed for three storm events per year. Stormwater samples will be collected and analyzed for a variety of constituents, principally nutrients. In addition to these efforts, the Permittees are reevaluating their overall Urban Runoff monitoring program to determine its effectiveness in meeting the following objectives:

1. Assess rates of mass loading
2. Assess influence of land use on water quality
3. Assess compliance with water quality objectives
4. Assess effectiveness of water quality controls
5. Detect illicit connections and illegal discharges
6. Identify problem areas and/or trends
7. Identify pollutants of concern
8. Identify baseline conditions
9. Establish/maintain a water quality database

To accomplish these goals, the following activities are conducted:

1. Collect water quality data
2. Collect rainfall/runoff data
3. Establish quality assurance/control procedures
4. Conduct data analysis and archiving
5. Install and maintain appropriate equipment
6. Prepare an annual report

The RCFC&WCD, in its role as Principal Permitee, participates in the Southern California Cooperative Stormwater Research/Monitoring Program. The key focus of this Cooperative Monitoring Program is to develop methodologies and assessment tools to more effectively understand urban stormwater and non-stormwater impacts to receiving waters. Additionally, some of the municipal permittees in the San Bernardino County and Riverside County have been requested to participate in the investigation of bacteriological water quality impairments in the Upper Santa Ana River.

The Permittees are encouraged to continue their participation in regional and watershed-wide monitoring programs. The Permittees are required to submit a revised water quality monitoring plan for the Executive Officer's approval.

IX. WATER QUALITY BENEFITS, COST ANALYSIS, AND FISCAL ANALYSIS

There are direct and indirect benefits from clean lake 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 meet 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.

The true magnitude of the urban runoff problem is still elusive and any cost estimate for cleaning up urban runoff would be premature short of end-of-pipe treatments. For urban 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 BMPs to the MEP to combat the problem.

The costs incurred by the Permittees in implementing these programs and policies can be divided into three broad categories:

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, Water Code Section 13267 requests, budget and other program documentation; coordination of consultant studies, Co-Permittee meetings, and training seminars.

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/catch basin 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 runoff NPDES program. However, the DAMP that was developed and implemented in response to the urban runoff program required additional programs and policies for pollution control.

3. Individual Costs of Pre-Existing Programs: These are costs incurred by each Permittee for water pollution control measures which were already in existence prior to the urban runoff NPDES program. These programs included recycling, litter control, street sweeping, drainage facility maintenance, and emergency spill response.

Historically, the Permittees have employed four distinct funding methods to finance their NPDES Activities. Many Permittees utilize a combination of these funding sources. The different methods include:

1. Santa Ana Watershed Benefit Assessment Area

In 1991, the RCFC&WCD established the Santa Ana Watershed Benefit Assessment Area (SAWBAA) to fund its NPDES activities. Currently, SAWBAA revenues fund both area-wide NPDES program activities and the RCFC&WCD's individual permit compliance activities.

2. County Service Area 152

In December 1991, the County of Riverside formed County Service Area 152 (CSA 152) to provide funding for compliance activities associated with its NPDES permit activities. Under the laws that govern CSAs, sub-areas may be established within the overall CSA area with different assessment rates set within each sub-area. The cities of Corona, Moreno Valley, Norco, Riverside, Lake Elsinore and San Jacinto elected to participate in CSA 152.

3. Utility Charge

The City of Hemet funds a portion of its NPDES program activities through a utility charge.

4. General Fund /Other Revenues

The remaining Permittees utilize general fund revenue to finance their NPDES activities. Several Permittees also report using general fund and other revenue sources (e.g., gas taxes, developer fees, etc.) to fund a portion of their Urban Runoff management activities.

The Annual Report provides the most recent budgets and expenditures projections available for the costs incurred by the Permittees in implementing these programs and policies.

X. 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 Urban Runoff 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 Urban Runoff discharges and Receiving Waters will be improved, thereby improving protection for the beneficial uses of Waters of the U.S. 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.

XI. PUBLIC WORKSHOP

A number of workshops have been held to discuss the draft MS4 permits for the Orange and San Bernardino counties within the Regional Board's jurisdiction. The details regarding these permits are posted on the Regional Board's website or may be obtained by calling the office at 909-782-4130. Building upon those permits, a workshop for the Order was conducted on May 31, 2002, in Huntington Beach, California and a second workshop was conducted on September 6, 2002, in Loma Linda, California. The Public Hearing for consideration of adoption of the Order is scheduled for the October 25, 2002, Board Meeting in Corona.

The Regional Board recognizes the significance of Riverside County's Storm Water/Clean Water Protection Program and will conduct, participate, and/or assist with at any workshop during the term of this Order to promote and discuss the progress of the Urban Runoff 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 permit may register their name, mailing address and phone number with the Regional Board office at the address given below.

XII. PUBLIC HEARING

The Regional Board will hold a public hearing regarding the proposed waste discharge requirements. The public hearing will be scheduled at a later time (tentatively on October 25, 2002, in the City of Corona) and information regarding the public hearing will also be posted on the website. Further information regarding the conduct and nature of the public hearing concerning these waste discharge requirements may be obtained by writing or visiting the Santa Ana Regional Board office, 3737 Main Street, Suite 500, Riverside, CA 92501.

XIII. INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Keith Elliott at (909) 782-4925. 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 10:00 a.m. and 4:00 p.m., Monday through Friday (excluding holidays).

XIV. REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group for applications may leave his name, 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.

XV. RECOMMENDATION

Adopt the proposed Order.

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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4	Glossary
5	Notice of Intent and Notice of Termination for Construction Activities
6	Fact Sheet
7	Notice of Intent for De-Minimus Discharges

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

[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 PCBs	Unknown Unknown Non-point Source	2021 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

[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);

[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.

[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

[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

[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.

<u>Final WQBELs for Bacterial Indicator during the Wet Season (effective Jan. 1, 2026)</u>

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

[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

[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

[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

[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.

[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. R8-2009-0003 prior to the adoption date of this Order), discharges will continue to be regulated under the terms and conditions of Order No. R8-2009-0003 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 R8-2009-0003 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**.**

_____

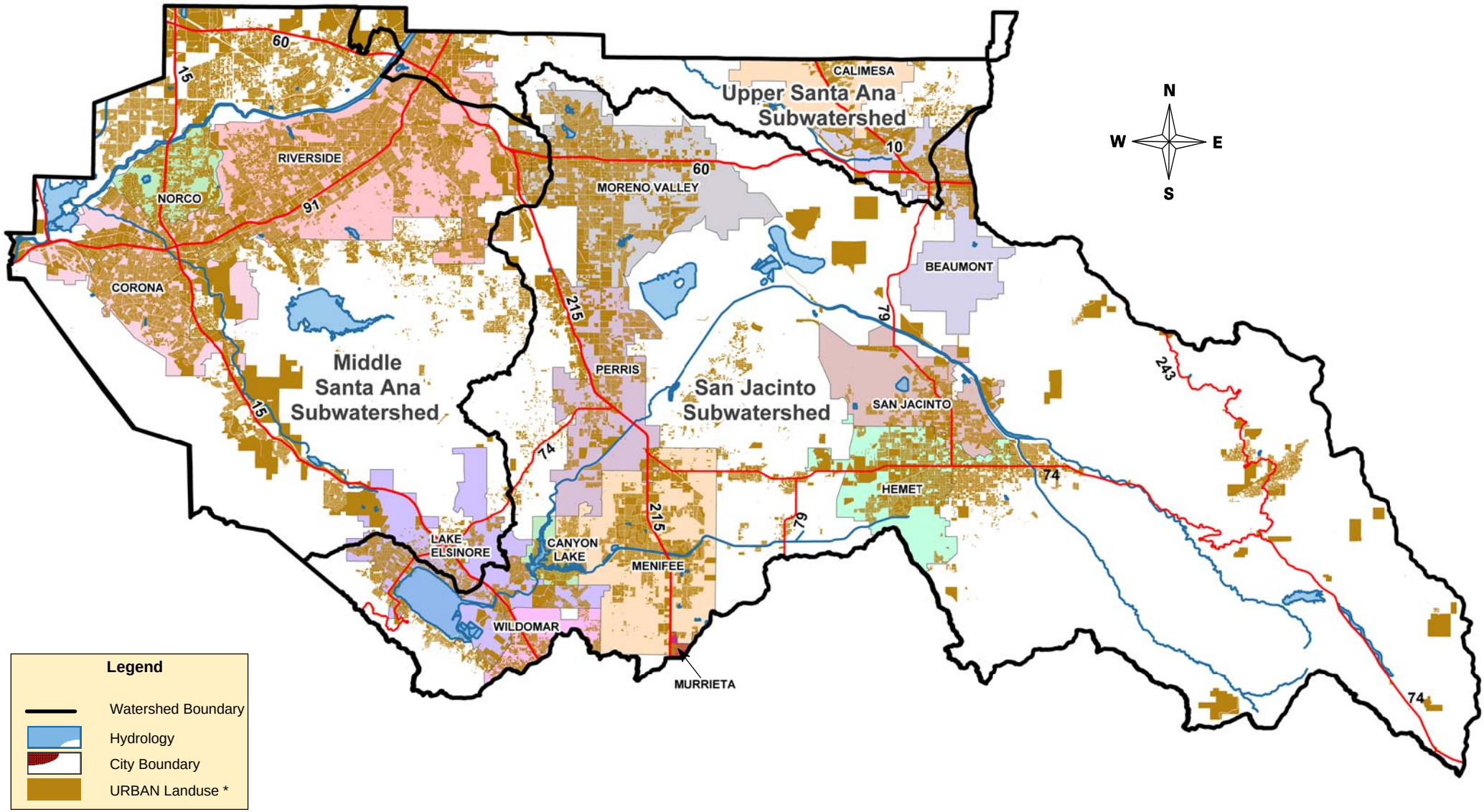
Gerard J. Thibeault
Executive Officer

APPENDIX 1

PERMIT AREA

ORDER NO. R8-2010-0033

ORDER NO. R8-2010-0033 (NPDES NO. CAS618003)
RIVERSIDE COUNTY AREA-WIDE URBAN RUNOFF MANAGEMENT PLAN



*** Areas not in URBAN: Agricultural, State, Federal, Tribal, Preserves & Open Space, Rural-Residential, Highways/Freeways**

APPENDIX 1

APPENDIX 2

OTHER ENTITIES THAT MAY DISCHARGE POLLUTANTS TO THE MS4

ORDER NO. R8-2010-0033

Appendix 2

OTHER POTENTIAL DISCHARGERS TO THE MS4s

Government Agencies

Department of the Air Force,
March Air Force Base – Special Districts (regulated under an individual NPDES permit)
State Parks
U.S. Army Corps of Engineers
Caltrans (regulated under a state-wide NPDES permit)
Department of Corrections
U.S. Forest Service
U.S. Department of the Interior – Bureau of Land Management

Hospitals

Corona Community Hospital
Hemet Valley Medical Center
Kaiser Foundation Hospital – Riverside
Loma Linda Hospital (Sun City)
Parkview Memorial Hospital
Riverside Community Hospital
Riverside County Regional Medical Center
Riverside General Hospital

Railroads

AT&SF Railway Company
Burlington Northern Railroad Company
Southern Pacific Railroad Company
Union Pacific Railroad

Special Districts/ Wastewater Agencies

Edgemont Community Services District
Jurupa Community Services District
Santa Ana Watershed Project Authority
Rubidoux Community Services District
Valley Wide Park and Recreation District

School Districts

Alvord Unified School District
Corona – Norco Unified School District
Hemet Unified School District
Lake Elsinore Unified School District
Menifee Union School District
Moreno Valley Unified School District
Nuview Union School District
Perris Elementary School District
Perris Union High School District
Riverside Unified School District
Romoland School District
San Jacinto Unified School District
Val Verde School District

Universities and Colleges

California Baptist University
La Sierra University
Mt. San Jacinto College
Riverside Community College
University of California, Riverside
California School for the Deaf, Riverside

Water Districts

Eastern Municipal Water District
Elsinore Valley Municipal Water District
Lake Hemet Municipal Water District
Lee Lake Water District
Metropolitan Water District
Western Municipal Water District

Tribal Lands

Soboba Band of Luiseno Indians
Morongo Band of Mission Indians

APPENDIX 3

MONITORING AND REPORTING PROGRAM

ORDER NO. R8-2010-0033

State of California
California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2010-0033
NPDES No. CAS618033

for
Riverside County Flood Control and Water Conservation District,
The County of Riverside and the Cities of Riverside County
Within the Santa Ana Region
AREA-WIDE URBAN STORM WATER RUNOFF MANAGEMENT PROGRAM

I. OBJECTIVES

The overall goal of the Urban Runoff monitoring program is to support the development of an effective Urban Runoff management program. The following are the major objectives:

A. To identify those Receiving Waters, which, without additional action to control pollution from urban storm water runoff, cannot reasonably be expected to achieve or maintain applicable Water Quality Standards required to sustain the designated beneficial uses, the goals, and the objectives of the Basin Plan.

B. To develop and support an effective Urban Runoff management program.

C. To identify significant water quality problems, related to discharges of Urban Runoff within the Permit Area.

D. To determine water quality status, trends, and Pollutants of concern associated with Urban Runoff and their impact on the Beneficial Uses of the Receiving Waters.

E. To analyze and interpret the collected data to determine the impact of Urban Runoff and/or validate relevant water quality models.

F. To characterize Pollutants associated with Urban Runoff, and to assess the influence of urban land uses on Receiving Water quality and associated Beneficial Uses.

G. To identify other sources of Pollutants in Urban Run off to the maximum extent possible (e.g., including, but not limited to, atmospheric deposition, contaminated sediments, other non-point sources, etc.)

H. To identify and permit or prohibit Illicit Connections.

I. To identify, verify and prohibit Illegal Discharges.

J. To verify and to identify sources of Pollutants in Urban Runoff.

K. To evaluate the effectiveness of the DAMP and WQMPs, including an estimate of Pollutant reductions achieved by the Site Design (Low Impact Development [LID], Treatment Control and Source Control BMPs implemented by the Permittees.

L. To evaluate the effectiveness of proposed Urban Runoff management programs to protect Receiving Water quality.

II. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR 122.41(j)].

1. This includes any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality in the case of storm channels and flow quality in the case of streams and lakes

2. All sample collection, handling, storage, and analysis shall be in accordance with test procedures under 40 CFR Part 136 (latest edition) "*Guidelines Establishing Test Procedures for the Analysis of Pollutants*," promulgated by the USEPA, the guidance being developed by the State Board pursuant to Water Code Section 13383.5, or other methods which are more sensitive than those specified in 40 CFR 136 and approved by the Executive Officer.

3. For priority Toxic Pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) shall be used for all analyses, unless otherwise specified.

4. For priority Toxic Pollutants, if the Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable 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) may be used instead of the ML listed in Appendix 4 of the SIP. The Principal Permittee must submit documentation from the laboratory to the Regional Board Executive Officer for approval prior to raising the ML for any constituent.

B. All chemical, bacteriological, and Toxicity analyses shall be conducted at a laboratory certified for such analyses by an appropriate governmental regulatory agency.

C. Analytical methods, target reporting limits and data reporting formats shall be compatible with California's Surface Water Ambient Monitoring Program (SWAMP) Quality Assurance Management Plan and with SWAMP's Procedures for Conducting Routine Field Measurement unless otherwise specified in this Monitoring and Reporting Program (MRP).

D. Revisions of this MRP 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 of the Order, and may include redistribution of monitoring resources to address TMDL needs, a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples collected.

E. The Executive Officer is authorized to allow the Permittees to participate in regional, statewide, national, or other monitoring programs in addition to or as part of this Urban Runoff monitoring program. Also, the Permittees are authorized to complement their Urban Runoff monitoring data with data from other monitoring sources, provided the monitoring conditions and sources are similar to those in the Santa Ana River watershed.

F. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both [40 CFR 122.41(j)(5)].

III. MONITORING PROGRAM

A. The Principal Permittee has been monitoring Urban Runoff and Receiving Waters since the first MS4 permit term. The Principal Permittee currently implements the Consolidated Monitoring Program (CMP) and participates in a number of other storm water or TMDL related monitoring programs such as: TMDL Bacterial and Nutrient Monitoring, WLA Compliance, BMP Effectiveness, Urban Source and Trend Evaluation, Receiving Water Quality, Hydromodification and Bioassessment. The Principal Permittee shall continue to implement the CMP and continue to participate in other related monitoring programs.

B. The Principal Permittee, on behalf of the Co-Permittees, participates (through a memorandum of understanding and cooperative agreements) with the 16 member agencies of the Storm Water Monitoring Coalition (SMC). The Permittees shall continue to cooperate with other MS4 permittees (including

Orange County and San Bernardino County), Southern California Coastal Water Research Project (SCCWRP), POTW operators, the dairy industry, the Santa Ana Watershed Project Authority (SAWPA), and other public and private organizations in the watershed to develop coordinated surface water quality monitoring programs, databases, and special studies as appropriate. The Regional Board supports continued coordination with SCCWRP and the SMC to facilitate and implement coordinated watershed based monitoring programs. The Permittees may use coordinated monitoring efforts such as the Middle Santa Ana River (MSAR) and Lake Elsinore/Canyon Lake (LE/CL) TMDL Task Forces, SCCWRP and SMC regional monitoring programs to address partially, or in full, the requirements of this MRP. A proposed coordinated monitoring program shall result in the development and implementation of a monitoring plan that:

1. Fully addresses the requirements of this MRP;

2. Describes how the external monitoring programs address the requirements of the MRP;

3. Include a quality assurance plan, including data management, validation, verification mechanism for the portions of the monitoring directly conducted by the Permittees;

4. Reference the locations of the quality assurance plans for regional components; and

5. Result in a coordinated Annual Report summarizing the pertinent Urban Runoff data from the coordinated programs necessary to address this MRP.

C. Within 12 months of adoption of this Order, the Permittees shall review the CMP, Regional and TMDL related monitoring programs that they conduct or participate to determine their effectiveness in achieving the Urban Runoff assessment requirements contained in Section IV.B, below. If this review indicates any data gaps, the Principal Permittee shall submit a revised CMP, or coordinate revisions to other regional programs for approval of the Executive Officer to ensure that the combined efforts adequately address the requirements of Section IV.B. The revised CMP, including a description of how other regional efforts combine with the CMP to address requirements of Section IV.B shall be submitted within 16 months of adoption of this Order and shall be implemented within six months of its approval by the Executive Officer. Pending approval of the revised CMP, current monitoring efforts will continue to be implemented.

D. <u>TMDL/303(d) Listed Waterbody Monitoring</u>: The Permittees identified as dischargers in adopted TMDLs shall continue to participate in TMDL monitoring programs as required by TMDL Implementation Plans. The compliance schedules for the two approved TMDLs within the Permit Area are beyond the five year MS4 Permit term. This Order requires Permittees identified as

dischargers in their respective TDMLs to conduct monitoring required by the TMDL Implementation Plans to determine the effectiveness of the BMPs implemented in reducing Pollutant loads and eventually to attain WLA by the deadlines specified in the respective TMDL Implementation Plans.

1. MSAR Bacteria WLA TMDL USEP monitoring

    a. On June 14, 2007, the TMDL task force members submitted a source evaluation plan and a monitoring plan. The Regional Board approved these plans on June 29, 2007, Resolution No. R8-2007-0046. A revised monitoring plan and an urban Bacterial Indicator source evaluation plan were approved by the Regional Board on April 18, 2008, Resolution No. R8-2008-0044. The MSAR Permittees within the MSAR watershed shall continue to conduct monitoring and source evaluations in accordance with the approved plans and report the findings in accordance with the schedules specified in the approved plans or as updated by subsequent Regional Board approved revisions.

    b. In conformance with Task 3 of the TMDL Implementation Plan contained in Resolution R8-2005-0001, the Permittees shall individually, or in conjunction with the MSAR TMDL Task Force, prepare a triennial report summarizing the data collected for the preceding 3 year period and evaluating compliance with the WLAs. The first report shall be due February 15, 2010.

    c. The Permittees shall conduct monitoring and reporting consistent with Section VI.D. of this Order to evaluate the effectiveness of the BMPs implemented in the watershed and determine their progress towards attaining compliance with the interim WQBELs, and final BMP-based WQBELS, if approved, or the final numeric WQBELS/WLAs.

2. Lake Elsinore/Canyon Lake Nutrient TMDL

    a. Monitor and report the effectiveness of the BMPs implemented in the watershed to control nutrient inputs into the lakes from Urban Runoff. Submit an Annual Report summarizing all relevant data from water quality monitoring programs and evaluating 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.

    b. The Permittees shall conduct monitoring and reporting consistent with Section VI.D. of this Order to evaluate the effectiveness of the BMPs implemented in the watershed and determine their progress towards attaining compliance with the interim WQBELs, and final BMP-based WQBELS, if approved, or the final numeric WQBELS/WLAs.

E. In addition, any requirements developed by the State Board in accordance with Water Code Section 13383.5 shall be considered during any revision of the CMP. The revised CMP shall, at a minimum, include the following:

1. Mass Emissions Monitoring – Core Stations:

a. An estimate of flow in cubic feet per second (cfs) from the Outfall/stream at the time of sampling.

b. Monitor mass emissions in Urban Runoff to:

i) Estimate the total mass emissions from the MS4s to Receiving Waters.

ii) Assess trends in mass emissions associated with specific urban storm water discharges from the MS4 over time.

iii) Determine if Urban Runoff may be contributing to exceedances of Water Quality Objectives or Beneficial Uses in Receiving Waters by comparing water quality data from Outfall and Receiving Water results to: (1) Water quality Objectives (WQOs); (2) California Toxic Rule (CTR) (3) USEPA Multi-Sector Permit Parameter Benchmark Values and (4) other MS4 discharger's monitoring data or 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.

iv) Representative samples from the first sampleable storm event (based on mobilization criteria to be established in the CMP) of the Wet Season (October 1 to May 31) and two more storm events shall be collected during the Wet Season. A minimum of two Dry Weather samples shall also be collected. Samples from the first sampleable storm event each year shall be analyzed for constituents according to the list provided in the 2007-2008 Santa Ana Region Monitoring Annual Report, Attachment A. This list includes 40 CFR 122 Appendix D Tables II and III, and Tables IV and V if expected to be present, and additional constituents. All samples shall be analyzed for *E. coli*, nutrients (Nitrates + Nitrites, potassium, and phosphorous), hardness[1], metals, pH, TSS, TOC, pesticides/herbicides, and Pollutants/stressors for 303(d) listed Receiving Waters. Dry Weather samples should also include analyses for TPH (8015M – direct injection) and oil and grease. The analyte list will be reviewed annually. Constituents may be added to the list for a selected monitoring station if they are expected to be present, and removed from the list if three consecutive samples from the station have not had detectable concentrations of the constituent.

[1] Hardness is necessary to evaluate some metal Water Quality Objectives in receiving waters.

v) Monitoring locations shall be integrated into a GIS database system. All monitoring data shall continue to be placed in an electronic database.

2. Water Column Toxicity Monitoring: Analyses for Toxicity to aquatic species shall be performed on receiving water samples to determine if there may be impacts of Urban Runoff on Toxicity of Receiving Waters. The *Ceriodaphnia dubia* survival (acute), Fathead Minnow larval survival (acute), and Selenastrum Capricornutum growth (chronic) tests shall be used to evaluate Toxicity on the sample from the first sampleable storm event, plus one other Wet Season storm event sample. Where applicable, two Dry Weather samples shall also be collected or equivalent procedures shall be proposed in the CMP. In addition, criteria shall be identified which will trigger the initiation of Toxicity Identification Evaluations (TIEs) and Toxicity Reduction Evaluations (TREs).

   To the extent that the Toxicity testing developed as part of the Regional Bioassessment Monitoring described in item 5 and Section D below, or other standardized Toxicity testing protocols developed by the State Board, Regional Board, SMC or SCCWRP, satisfies the objective of determining the impact of Urban Runoff on Toxicity of Receiving Waters, the Permittees may satisfy this requirement by participating in the regional bioassessment effort or conducting Toxicity testing consistent with the standardized protocols.

3. Illicit Connection/Illegal Discharge (IC/ID) Monitoring: The Permittees shall review and update their Dry Weather and Wet Weather reconnaissance strategies to identify and eliminate IC/IDs using the Guidance Manual for Illicit Discharge, Detection, and Elimination developed by the Center for Watershed Protection[2] or any other equivalent program. 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. The Dry Weather monitoring for nitrogen and total dissolved solids shall be used to establish a baseline dry weather flow concentration for TDS and TIN at each Core monitoring location.

4. Sources of Data: Where possible and applicable, water quality data shall be obtained from monitoring efforts of other public or private agencies/entities (e.g., Caltrans).

5. Bioassessment: In lieu of developing an independent bioassessment program as required in the prior term permit, the Principal Permittee, on behalf of the Co-Permittees, participates (through a memorandum of understanding and cooperative agreements) with the 16 member agencies of the SMC. The SMC's Bioassessment Working Group conducts bioassessments on a regional basis. The Principal Permittee in coordination with SCCWRP shall ensure that

[2] 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).

a sufficient number of monitoring stations are selected for this program from locations within the Permit Area.

a. The Principal Permittee, in collaboration with the SMC, shall conduct sampling, analysis, and reporting of specified in-stream biological and habitat data within the 5-year permit cycle according to the protocols specified in the SCCWRP Tech Report No. 539.

b. Within Riverside County, the bioassessment project area consists of the lower half of the MSAR watershed, the San Jacinto watershed, and the northern Santa Margarita watershed (northern San Diego) for a total of 1.5 watershed units, a minimum of 9 samples shall be collected per year[3]. Within Riverside County's Santa Ana and San Jacinto Watersheds, which are in the Permit Area, the Permittees shall sample 5 sites per year. SWAMP samples 2 sites per year.

c. For long-term trend monitoring, the Principal Permittee shall collect a minimum of 1 sample per year during the dry weather index period, as noted in the SCCWRP Tech Report No. 539. Additional samples may be collected to improve data quality for trend analysis. At a minimum, chemistry and aquatic Toxicity should be used as indicators for trend analysis.

d. Any baseline and historic information on stream geomorphology and ecological health, including aquatic habitats, in the Receiving Waters and the findings from the trend analysis shall be used to evaluate the effectiveness of Urban Runoff management program, including the requirements specified in the Order.

6. A Quality Assurance Program Plan (QAPP) within the CMP that describes how data will be collected and analyzed to ensure that data is consistent with State and Regional Board monitoring programs and is of high quality. Dischargers shall develop a QAPP that is compatible with the State's Surface Water Ambient Monitoring Program (SWAMP) QAPP and approved by the Regional Board's Quality Assurance Officer. A QAPP template is available, upon request, through the State Board's SWAMP website (http://www.waterboards.ca.gov/water_issues/programs/swamp/qapp.shtml). All analytical methods, target reporting limits, and data reporting formats should be SWAMP compatible unless otherwise specified in this MRP. The QAPP will include location of sample site(s), description of analytical techniques, data quality objectives, and other standard quality assurance information.

[3] See Table 4 page 15 of Technical Report No.539.

7. A procedure for the collection, analysis, and interpretation of existing data from local, regional or national monitoring programs. These data sources may be utilized to:
   a. Characterize different sources of Pollutants discharged to the MS4;
   b. Determine pollutant generation, transport and fate;
   c. Develop a relationship between land use, development size, storm size and the event mean concentration of Pollutants;
   d. Determine spatial and temporal variances in Urban Runoff quality and seasonal and other bias in the collected data; and
   e. Identify any unique features of the permitted area.
   f. The Permittees are encouraged to use water quality data from similar studies, if available.

8. The CMP update shall include descriptions of:
   a. The number of monitoring stations;
   b. Monitoring locations within MS4s, Major Outfalls, and Receiving Waters; environmental indicators (e.g., ecosystem, flow, biological, habitat, chemical, sediment, stream health, etc.) chosen for monitoring; The initial update shall at least contain the sampling stations listed in Table 1, below:

Table 1 Current Core Monitoring Stations

Station Number	Class	Station Description	Latitude	Longitude
40	Outfall	Corona Storm Drain – Line K Harrison & Sheridan St.	33.885	-117.568611
316	Outfall	Sunnymead Chanel – Line B Alessandro & Heacock	33.917778	-117.242222
318	Outfall	Hemet Channel @ Sanderson Ave.	33.734167	-117.005556
364	Outfall	Magnolia Center – SD @ Santa Ana River	33.964722	-117.414444
702	Outfall	University Wash – Market & Bowling Green	33.9975	-117.370833
707	Outfall	North Norco Channel @ Country Club Lane	33.907778	-117.583889
752	Outfall	Perris Line J - Sunset Ave below Murrieta Rd.	33.803333	-117.2075

   c. Total number of samples to be collected from each station, frequency of sampling during Wet Weather 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 qualifications of laboratories performing analyses;

d. A procedure for analyzing the collected data and interpreting the results. This procedure shall include the evaluation of the effectiveness of the BMPs, a comparative analysis of the Permittees' monitoring data to the USEPA Multi-Sector Permit Parameter Benchmark Values and applicable Water Quality Objectives specified in Chapter 4 of the Basin Plan, and the need for any refinement of the WQMPs, the DAMP and or/the LIPs.

e. Parameters selected for field screening and for laboratory work; and

f. A description of the responsibilities of all the participants in this program, including cost sharing.

g. Receiving Water Monitoring:

   Permittees shall select at least one representative receiving water location within each of the San Jacinto River and Santa Ana River watersheds. These locations should be close Major Outfalls, coordinated with other regional monitoring programs to the extent feasible, include locations where chronic and/or persistent water quality problems associated with Urban Runoff have been identified, and should be selected so as to be useful to determine if Urban Runoff is causing or contributing to violations of Water Quality Standards in the Receiving Waters.

h. Monitoring within MS4s:
   Permittees shall evaluate their current CMP MS4 monitoring locations (identified in Table 1, above) to ensure that they are representative of urban runoff. The objective of this monitoring element is to determine the pollutant loads from the MS4s and to determine their trend. This monitoring requirement may be incorporated into the mass emissions monitoring described in III.E.1, above.

F. REGIONAL WATERSHED MONITORING

1. The objectives of the Regional Watershed Monitoring Program overseen by the SWAMP and the SMC and coordinated by SCCWRP are:

   a. To assess the current status of streams in Southern California.

   b. To identify major stressors to aquatic life.

   c. To monitor the trend in water quality in Southern California streams.

2. The bioassessment discussed above, should provide information about the biological, chemical and toxicological integrity of Receiving Waters. Baseline and trend monitoring information on the biotic and geomorphological condition of the Receiving Waters should be used to evaluate the effectiveness of the Urban Runoff pollution control measures.

3. The Riverside County Regional Watershed monitoring area is within the lower half of the MSAR watershed, the San Jacinto watershed, and the northern Santa Margarita watershed (northern San Diego) for a total of 1.5 watershed units[4]. Within Riverside County's Santa Ana and San Jacinto watersheds, the Permittees sample 5 sites per year. SWAMP samples 2 sites per year.

4. The sampling sites in each watershed unit were determined according to distribution or abundance of the three land uses: urban, agriculture, or open. The sampling grid includes 15 watershed units located from Ventura to San Diego and as far east as San Bernardino and Riverside Counties. A total of 450 samples in the 15 watershed units will be collected within a five year period to assess the spatial extent of impacts to streams within the area. Samples will be collected at sites representing each of the three land use types. Each site will be sampled only once during an index period and not all sites need to be sampled during the same year. One-fifth of the samples (90 samples) will be collected each year for the 15 watersheds. Sampling events shall be conducted between 4 to 12 weeks following the last significant rainfall. No sampling shall occur within 72 hours of any measurable rainfall. The default index period will be from May 15 to July 15. The specifics and details of the Regional Watershed Program are discussed in "The Regional Monitoring of Southern California's Watershed SMC Bioassessment Working Group", SCCWRP, Technical Report No. 539, December 2007 (The Tech Report).

5. Any baseline and historic information on stream geomorphology and ecological health, including aquatic habitats, in the Receiving Waters and the findings from the trend analysis shall be used to evaluate the effectiveness of Urban Runoff management program, including the requirements specified in the Order.

G. HYDROMODIFICATION MONITORING PROGRAM

This Order requires development and implementation of a Hydromodification Monitoring Plan as part of the Watershed Action Plan (WAP) to evaluate the effectiveness of hydromodification controls implemented within the Permit Area (Some or all of the following requirements may be satisfied by the Permittees participation in the "Development of Tools for Hydromodification Assessment and Management' Project" undertaken by the SMC and coordinated by SCCWRP and follow on efforts to develop Hydromodification monitoring guidance).

1. The Order requires the Permittees to revise the DAMP to incorporate Watershed Action Plan principles within three years of adoption of the Order. The hydromodification requirements require the Permittees to identify

[4] See Table 4 page 15 of Technical Report No.539.

vulnerable streams and possible BMPs to minimize HCOCs and tools to measure any impacts on geomorphology and aquatic resources.

2. The Hydromodification monitoring program shall:

   a. Assess the effectiveness of Hydromodification management within the Permit Area.

   b. Predict the effects of urbanization on stream stability within the Permit Area.

H. LOW IMPACT DEVELOPMENT BMP MONITORING

The Principal Permittee shall continue to participate in data collection and monitoring to assess the effectiveness of LID techniques in semi-arid climate as part of the SMC project titled, "Quantifying the Effectiveness of Site Design/ Low Impact Development Best Management Practices in Southern California". The Principal Permittee is also developing a regional LID BMP testing and demonstration facility at the main office that meets the intent of this requirement (currently the facility data is intended to be integrated into the SMC project).

IV. RECORD KEEPING REQUIREMENTS

A. All monitoring activities shall meet the following requirements:

1. The Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports prepared as per this MRP and records of all data used to complete the Report of Waste Discharge and Annual Reports for a period of at least five years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Board or USEPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge [40 CFR 122.41(j)(2), CWC section 13383(a)].

2. Records of monitoring information shall include [40 CFR 122.41(j)(3)]:

   a. The date, exact place, and time of sampling or measurements;

   b. The individual(s) who performed the sampling or measurements;

   c. The date(s) analyses were performed;

   d. The individual(s) who performed the analyses;

   e. The analytical techniques or methods used; and

   f. The results of such analyses.

3. Calculations for all Effluent Limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this MRP [40 CFR 122.41(l)(4)(iii)].

B. 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 under penalty of perjury.

2. The Permittees shall submit an Annual Report to the Executive Officer and to the Regional Administrator of the USEPA, Region 9, no later than November 30th, of each year. This progress report shall also be submitted in a mutually agreeable electronic format that is text searchable. Any monitoring data shall also be submitted electronically in the form outlined in Section IV.B.4 of this MRP. At a minimum, the Annual 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 BMPs established under the IC/ID program and the DAMP. The effectiveness may be measured in terms of how successful the program has been in eliminating IC/IDs and/or reducing pollutant loads in urban storm water runoff, including summaries of Permittee actions to investigate and eliminate or permit IC/IDs and measures to reduce and/or eliminate the discharge of Pollutants, including trash and debris

   c. As assessment of BMPs 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. The effectiveness evaluation shall consider changes in land use and population on the quality of Receiving Waters and the impact of development on sediment loading within sediment impaired Receiving Waters and recommend necessary changes to program implementation and monitoring needs.

   d. An assessment of the Permittees compliance status with the Receiving Waters Limitations, Section VII of this Order, including any proposed modifications to the DAMP if the Receiving Water Limitations are not fully achieved.

   e. An overall program assessment. The Permittees are encouraged to use the program assessment methodology described in the 2007 ROWD. The Permittees should determine, to the extent practicable, water quality

improvements and Pollutant load reductions resulting from implementation of various program elements. The Permittees may also use the "Municipal Storm Water Program Effectiveness Assessment Guidance" developed by CASQA in May 2007 as guidance for assessing program effectiveness at 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.

f. Description of program modifications and improvements identified during the program assessment above along with implementation schedule for incorporation of revisions into the Local Implementation Plans (LIPs).

g. An assessment of any modifications to the WQMPs, or the DAMP made to comply with CWA requirements to reduce the discharge of Pollutants to the MEP;

h. A summary, evaluation, and discussion of monitoring results from the previous year and any changes to the monitoring program to be made the following year;

i. A fiscal resources analysis progress report as described in Section XVIII.B of Order No. R8-2010-0033 including:

   i. Each Permittee's expenditures for the previous fiscal year;

   ii. Each Permittee's budget for the current fiscal year; and

   iii. A description of the source of funds.

j. A draft work plan that describes the proposed implementation of the LIPs and DAMP for next fiscal year. The work plan shall include clearly defined tasks, responsibilities, and schedules for implementation of the storm water program and each Permittee's actions for the next fiscal year;

k. Major changes in any previously submitted plans/policies;

l. If the Implementation Agreement is revised, a copy of the signature page and revisions to the Implementation Agreement.

m. A review of each Permittee's Storm Water Ordinances and their enforcement practices to assess their effectiveness in prohibiting non-exempt, Non-storm Water discharges to the MS4 (The Permittees may propose appropriate BMPs in lieu of prohibiting these discharges, where the Permittees are responsible for ensuring that dischargers adequately maintain those BMPs).

3. The Co-Permittees shall be responsible for the submittal of all required information/materials needed to comply with this order in a timely manner to the Principal Permittee. A duly authorized representative of the Co-Permittee shall sign all such submittals under penalty of perjury.

4. The monitoring data transmittals to the Regional Board shall be in the form developed by the SMC and approved by the State Board in the document entitled "Standardized Data Exchange Formats". This document was developed in order to provide a standard format for all data transfers so that data can be universally shared and evaluated from various programs.

V. REPORTING SCHEDULE

All reports required by this Order shall be submitted to the Executive Officer in accordance with the following schedule:

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
III.A.1.e III.B.3.a,d,e & XVII.D.		Management Steering Committee meetings to discuss MS4 Permit implementation	Held at least twice per year.	Annual Report
III.A.1.f III.B.3.a,d,e & XVII.D.		Permittee Technical Committee meetings to discuss permit implementation	Held at least 10 times each year	Annual Report
III.B.3.a,d,e & XVII.D.		Co-Permittees participate in Management Steering and Technical Committee meetings to discuss MS4 Permit implementation	Attend at least 1 out of 2 Management and 8 out of 10 Technical meetings each year	Annual Report
III.A.1.r		The Principal Permittee shall develop a library of BMP performance reports, and revise the BMP performance report annually thereafter.	Within 6 months of permit adoption	
III.A.1.s		The Principal Permittee shall coordinate a review of the DAMP with the Co-Permittees to determine the need for update or revisions and establish a schedule for those revisions.	Within 6 months of permit adoption	
III.B.2.g		Submit up-to-date MS4 facility maps	Annually to Principal Permittee	Annual Report

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
III.B.2.h		Submit reports & information for Annual Report	Annually to Principal Permittee	Annual Report
III.C.		Evaluate Implementation Agreement annually to determine need for revision.	Annually	Report findings and schedule for revisions to the Implementation Agreement in 2009-2010 Annual Report.
III.C.		Allow new permittees to join MS4 permit	Per schedule required in Section III.A.1.s	Report findings and schedule for revisions to the Implementation Agreement in 2009-2010 Annual report.
IV.A.		Permittees shall develop and submit for approval a LIP Template	Within 6 months of adoption of Order	
IV.B.		Complete a Co-Permittee specific LIP	Within 12 months of approval of the Template	Within 12 months of approval of the Template
VI.D.1.a.ii		Submit reports summarizing all relevant data from the watershed-wide water quality monitoring program.	Beginning in 2010 Cool (or wet) weather Warm (or dry) weather	 May 31st December 31st.
VI.D.1.a.iii		Submit comprehensive reports every three years summarizing the data collected for the preceding 3 year period and evaluating progress towards achieving the urban waste load allocation by the dates specified in the TMDL.	Beginning in 2010 every three years	February 15, 2010.
VI.D.1.a.iv		Submit semi-annual reports each year as required under the approved USEP, and any amendments thereto.	The Dec 31st report (VI.D.1.a.ii) and the Jan 31st report (VI.D.1.a.iv) may be incorporated into the (VI.D.1.a.ii) report for the years the tri-annual report is generated.	Semi-annually on January 31st and July 31st

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
VI.D.1.a.v		Revise the DAMP as specified in Task 4.2 of the MSAR-TMDL Implementation Plan.	Sumarize data in Annual Report.	Annual Report
VI.D.1.a.vi		Revise the Water Quality Management Plan (WQMP)	As specified in Task 4.4 of the MSAR-TMDL Implementation Plan.	Annual Report
VI.D.1.a.vii		Amend the Local Implementation Plans (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		Annual Report
VI.D.1.b. & VI.D.1.c.		The MSAR Permittees shall submit a Comprehensive Bacteria Reduction Plan (CBRP) to achieve the final WQBELs for bacterial indicators during the Dry Season by December 31, 2015. Enforcement starts no sooner than January 1, 2016		Draft by December 31, 2010 Final by Dec 31, 2015.
VI.D.1.c.i.(8)		Revise the DAMP, WQMP, & LIPs	Within 180 days of CBRP approval.	
VI.D.2.a.		Submit Phase 2 Alternatives	December 31, 2010	
		Submit O&M for Agreement for Fishery Management Program	December 31, 2010	
		Submit O&M for 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.	
VI.D.2.b.		Linkage Analysis Study	August 31, 2010	
		Watershed Source Loading Study	August 31, 2010	

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[a]**			
		Model Evaluation	December 31, 2010	
		Construct/Calibrate Model	June 30, 2011	
		Conduct Model Scenarios	August 31, 2011	
		Model Update Final Report	November 30, 2011	
VI.D.2.c.		Revise DAMP, WQMP, & LIPs to incorporate the compliance plans required above.		Annual Report
VI.D.2.h.		Summarize all relevant data from water quality monitoring programs and evaluate compliance with the LE/CL TMDL	Annually	Annual Report
VI.D.2. d. & VI.D.2. e.		Submit CNRP	December 31, 2011	December 31, 2020.
VI.D.2.a.		Initiate Phase 2 LE/CL TMDL data collection.	December 31, 2010	
VI.D.2.j.		Tables 9 & 10 become WQBELs if CNRP is not adopted by Regional Board	December 31, 2020	
VII.D.1		Report upon determination that discharges from the MS4 are causing or contributing to an exceedance of an applicable WQS	Within two (2) working days	Within Annual update of DAMP
VII.D.2		Modify DAMP, LIP, and MRP to address Receiving Water Limit Violations and implementation schedule.	---	30 days after approval of Subsection VI.D. report by Executive Officer
VII.D.4		Report any exceedance solely due to discharges outside the Permittees jurisdiction.		Within two (2) working days of becoming aware of the situation, provide oral or e-mail notice and provide written documentation within ten (10) calendar days of becoming aware of the situation.
VIII.C.		Promulgate ordinances that would control for known pathogen or Bacterial Indicator sources	Within 3 years of adoption	Annual Report

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
VIII.F.		Review Storm Water Ordinances for effectiveness in prohibiting discharges to the MS4	Annual Report	
VIII. G.		Certification statement, signed by the Chief legal counsel, that the Permittee has obtained all necessary legal authority	Within 24 months of Order adoption.	Annual Report
VIII.H.		Permittees shall effectiveness of, implementation and enforcement response procedures.	Annually	Annual Report
IX. A.		Eliminate or permit IC/IDs		60 calendar days from receipt of notice from a third party.
IX.D.		Review and revise IC/ID program	18 months after Order adoption	Annual Report
IX.G.		Annually review and evaluate their IC/ID or IDDE program to determine if the program needs to be adjusted.	Annually	Annually
IX.H.		Maintain database summarizing IC/ID incident response	Annually	Annual Report
X.D.		Maintain inventory of septic systems within its jurisdiction completed in 2008.	Ongoing	Annual Report.
XI.A.11.		Each Permittee shall document, evaluate and annually report the effectiveness of its enforcement procedures in achieving prompt and timely compliance.	Annually	Annual Report
XI.A.13.		Permittees to evaluate and report adequacy of inspection programs conducted by other agencies on behalf of Permittee.	Annually	Annual Report

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XI.B.4.		An inventory and inspection frequency of: Wet Season(Oct 1 – May 31): High = 1/mo., Med = 2/season, low = 1/season Dry Season: 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		Annual Report
XI.C.3		All high priority industrial facilities 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.		Annual Report
XI.D.4		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 MS4 Permit cycle.		Annual Report
XI.D.6		Notify all mobile businesses operating within the County concerning the minimum source control and pollution prevention measures that they must develop and implement.	Within 18 months of adoption of this Order	Annually
XI.D.7		The Principal Permittee shall develop an enforcement strategy to address mobile businesses.	Within 24 months of adoption of this Order	Annually

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XI.E.1		Each Permittee shall develop and implement a residential program to reduce the discharge of Pollutants from residences to the MS4s to the MEP.	Within 18 months of adoption of this Order	Annually
XI.E.6.		Co-Permittees to provide an evaluation of its residential program	Annually starting with the second Annual Report following MS4 Permit adoption	Annually starting with the third Annual Report following MS4 Permit adoption
XII.B.3 & B8.		The Co-Permittees shall submit to the Regional Board a Watershed Action Plan	Within three years of adoption of MS4 Permit.	Annual Report
XII.B.5		Develop HMP	Submit within 4 years of adoption	
XII.C.1.		Each Permittee shall review the watershed protection principles and policies in its General Plan and related documents to eliminate barriers to LID.	Within 24 months of adoption of this Order	Annually
XII.D.1.		Each Permittee to submit a revised WQMP to incorporate new elements required in the Order	Within 18 months of adoption of this Order	Annual Report
XII.D.5.		Principal Permittee to develop recommendations for streamlining regulatory agency approval of regional Treatment Control BMPs.	Within 24 months of adoption of this Order	Annually
XII.E.1		Permittees shall update the WQMP to incorporate LID principles,	18 months of Order adoption	
XII.E.4.		Revise Ordinances to promote Green Infilstructure	18 months of Order adoption. Implement within 6 months of EO approval.	
XII.E.5.		Each Permittee to update its landscape ordinance consistent with requirements of AB 1881 and annually evaluate effectiveness with respect to water efficiency and water conservation goals	January 31, 2010	2011-2012 Annual Report

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XII. F.		Develop standard design and post-development BMP guidance for streets, roads etc. projects.	Within 24 months of adoption of this Order, Implement within 6 months of EO approval.	
XII.G1.		Permittees shall establish technically-based feasibility criteria for project evaluation to determine feasibility of implementing LID	Within 18 months of MS4 Permit adoption	No reporting specified
XII.H.		Each Permittee shall develop and implement standard procedures and tools, and include in its LIP.	Within 18 months of adoption of this Order	Annually
XII.K.4.		The Permittees shall maintain a database to track operation and maintenance of post-construction BMPs.		Annually
XII.K.5		Public Agency Treatment Control BMPs, shall be inspected prior to the Wet Season.	Within18 months of Order adoption and within the 5 year permit term.	Annually
		New Development (Redevelopment) Treatment Control BMPs, shall be inspected prior to the Wet Season.	Based on schedule submitted but at least once within the 5 year permit term.	Annually
XII.K.6.		Provide list of all post-construction Treatment Control BMPs approved, constructed and/or operating	Annually	Annual Report
XII.L.		Provisions for LID and HCOC included in WQMP.	Within 45 days of approval of WQMP.	
XIII.A.		Review public education and outreach efforts and revise their activities to adapt to the needs identified in the annual reassessment.		Annual Report
XIII.B.		Status report on Public Education and Outreach requirements and changes to the ongoing program	Annually	Annual Report

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XIII.C.		Implement assessment program to measure increases in public knowledge of impacts of Urban Runoff on Receiving Waters	First Annual Report following MS4 Permit adoption	
XIII.F.		The Permittees shall develop, maintain and distribute 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.	Within 18 months of adoption of this Order	Annual Report
XIII.I.		The Public Education Committee shall meet at least twice per year.		Annual Report
XIII.J.		Sponsor or staff an Urban Runoff 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.	Annually
XIII.K.		Involve public agency organizations, listed in Appendix 2, in Urban Runoff program. Notify the Regional Board where assistance is needed in improving local cooperation.		Annual Report
XIII.L		Develop and distribute BMP Fact Sheets for mobile businesses	Within 18 months of adoption of this Order	
XIV.A.		Review activities and facilities to determine the need for revisions to Section 5 of the DAMP and LIP.	Annually	Annual Report

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XIV.B.		Each Permittee shall review its inventory of fixed facilities listed in the DAMP, its field operations and MS4 facilities to ensure that public agency facilities and activities do not cause or contribute to a Pollution or nuisance in Receiving Waters.	Within 12 months of adoption of this Order	Annual Report
XIV.C.		Conduct inspections of its fixed facilities and field operations.	Annually	Annual Report
XIV. D.		Evaluate cleaning schedule.	Annually	Annual Report
XIV.E.		Unless otherwise determined, each Permittee shall inspect, clean & maintain at least 80% of it's open channels, catch basins, retention/detention basins, and wetlands created for Urban Runoff treatment.	Annually	Annual Report
XIV.G1.c.		Notify the Executive Officer of the proposed construction project by electronically submitting Permit Registration Documents (PRDs).	Prior to commencement of each construction project.	
XIV.G1.d.		the Executive Officer shall be notified of the completion of the project by submitting a Notice of Termination (NOT).	Upon completion of each construction project.	
XIV.G2.b.		Notify the Executive Officer of each proposed deminimus discharge at least 15 days prior to start of the discharge	At least 15 days prior to discharge.	At least 15 days prior to discharge.
XV.A		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	Within 24 months of adoption of Order	DAMP will be updated within 24 months of adoption of Order. LIP will be updated within 12 months of approval of LIP template by EO

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XV.A., XV.E. .		Each Permitee's LIP shall describe a program to provide formal and informal training to Permittee staff and contractors that implement the provisions of this Order. Provide the specified training.	Within 24 months of adoption of this Order and annually thereafter.	LIP will be updated within 24 months of order adoption.
XV.F.		Principal Permittee shall provide and document training to applicable Permittee staff on area wide procedures such as the DAMP, and any other applicable guidance and procedures developed by the Permittees to address activities in fixed facilities as well as field operations, including MS4 maintenance.	Within 12 months of adoption of this Order, within 12 months of hire and every two years, thereafter.	Bi-annually
XV.H*		Principal Permittee shall notify Regional Board staff		When notifying Permittees of training session.
XVI.A.		Notify of emergency events..		Within 24 hours of discovery
XVI.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.		Consistent with 2006-003-DWQ.
XVI.D.		Hazardous Waste Spills	Notify within 24 hours.	
XVI.E.		Facilities operating without an applicable General permit.		Reported within 14 calendar days
XVII.A.		Evaluate the effectiveness of the Urban Runoff management program.	By November 30 of each year.	Annually by November 30.
XVII.B.		Amended DAMP pages.		Annual Report
XVIII.B.		Financial analysis report		Annual Report
XXII.A.		Report of Waste Discharge	180 days before permit expires	Jan 29, 2015

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[a]**			
Appendix 3, III.C.		Review CMP to determine their effectiveness in Urban Runoff program assessment	Within 12 months of adoption of this Order	N/A
		Submit Revised CMP	Within 16 months of adoption of this Order and implement within 6 months of approval.	
Appendix 3, III.D.1.b.		Prepare a triennial report summarizing the data collected for the preceding 3 year period and evaluating compliance with the WLAs.	Every three years	The first report shall be due February 15, 2010.
Appendix 3, III.D.2		Submit an annual report summarizing all relevant data from water quality monitoring programs and evaluating 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.	Annually	Annual Report
Appendix 3, IV.B.2.		Annual Report	Annually	November 30th

(a) This column to be completed by Permittees.

Date: 1-29-10

Ordered by

Gerard J. Thibeault
Executive Officer

APPENDIX 4

GLOSSARY

ORDER NO. R8-2010-0033

Appendix 4, GLOSSARY

40 CFR – Code of Federal Regulations Title 40: Protection of the Environment.

Annual Report – Report summarizing compliance information required to be submitted annually to the Regional Board on or before each November 30th.

Anthropogenic – Generated from human activities

APN – Assessor's parcel number

Basin Plan – Water Quality Control Plan developed by the Regional Board for the Santa Ana River watershed.

BAT [Best Available Technology] – Technology-based standard established by Congress in CWA Section 402(p)(3)(A) for industrial dischargers of storm water. Technology-based standards establish the level of Pollutant reductions that dischargers must achieve, typically by treatment or by a combination of Source Controls and Structural BMPs. BAT generally emphasizes treatment methods first and Pollution Prevention and Source Control BMPs secondarily. The best economically achievable technology that will result in reasonable further progress toward the national goal of eliminating the discharge of all Pollutants is determined in accordance with regulations issued by the USEPA Administrator. Factors relating to the assessment of BAT shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the permitting authority deems appropriate.

BCT [Best Conventional Technology] – Treatment techniques, processes, and procedure innovations, and operating methods that eliminate or reduce chemical, physical, and biological Pollutant constituents.

Beneficial Use – Uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. “Beneficial Uses” that may be protected 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. Existing Beneficial Uses are those that were attained in the surface or ground water on or after November 28, 1975; and potential Beneficial Uses are those that would probably develop in future years through the implementation of various control measures. “Beneficial Uses” are equivalent to “Designated Uses” under federal law. [California

Water Code Section 13050(f)] Beneficial Uses for the Receiving Waters are identified in the Basin Plan.

Biological Integrity – Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5:55-68 as: "A balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region." Also referred to as ecosystem health.

BMP [Best Management Practices] – Defined in 40 CFR 122.2 as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the Pollution of Waters of the U.S. 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. In the case of MS4 permits, BMPs are typically used in place of Numeric Effluent Limits.

CAFO – Concentrated animal feeding operation.

Caltrans – California Department of Transportation.

CAP – The Commercial and Industrial Compliance Assistance Program is a Riverside County Environmental Health Department program that includes a storm water survey and educational outreach as part of existing inspections of Hazardous Material handlers and retail food service activities. Hazardous Waste handling facilities are inspected at least once during a two-year cycle. Restaurants are inspected at least once during the MS4 Permit cycle. Any completed surveys that indicate non-compliance are forwarded to the appropriate jurisdiction's code enforcement division. The Permittees notify Regional Board staff when conditions are observed during such inspections that appear to violate the General Storm Water Permits or a permit issued by the Regional Board.

CEQA – California Environmental Quality Act (Section 21000 et seq. of the California Public Resources Code).

CIEP – Compliance Inspection and Enforcement Program

Cleaning – Removal of litter or debris that can impact Receiving Waters.

CMP – Consolidated Program for Water Quality Monitoring, Riverside County Flood Control and Water Conservation District, October 2008.

Commercial Facilities – Businesses that have the potential to discharge Pollutants to the MS4 not otherwise covered by the General Industrial Permit that are described in Section 8.1 of the DAMP. These businesses are inspected as part of the CAP or equivalent as described in Section 8.1 of the DAMP. Commercial Facilities include businesses based in a Permittee's jurisdiction that perform mobile carpet, drape or

furniture cleaning; mobile automobile or other vehicle washing and mobile high pressure or steam cleaning.

Comprehensive TMDL Plan – A plan presenting a long-term solution designed to achieve compliance with the WLAs by the dates specified in the TMDLs. This plan includes a description of the proposed BMPs and the documentation demonstrating that the BMPs are expected to attain the WLAs by the compliance dates when implemented.

Conditions of Concern – Scour, erosion (sheet, rill and/or gully), aggradation (raising of a streambed from sediment deposition), and changes in fluvial geomorphology, hydrology or the aquatic ecosystem.

Construction Site – A site with activities 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.

Contamination – As defined in the Porter-Cologne Water Quality Control Act, contamination is "an Impairment of the quality of 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 U.S. are affected.

Co-Permittees – County of Riverside and the cities of Beaumont, Calimesa, Canyon Lake, Corona, Hemet, Lake Elsinore, Menifee, Murrieta, Moreno Valley, Norco, Perris, Riverside, San Jacinto and Wildomar.

County – County of Riverside, a legal subdivision of the State of California.

CSA 152 – County Service Area 152

CWA – Federal Clean Water Act

CZARA – Coastal Zone Act Reauthorization Amendments of 1990

DAMP [Drainage Area Management Plan] – The DAMP is a programmatic document developed by the Permittees and approved by the Executive Officer that outlines the major programs and policies that the Permittees individually and/or collectively implement to manage Urban Runoff in the Permit Area.

DDT – Dichlorodiphenyltrichloroethane – An insecticide first used in 1939. Most uses of DDT were banned in 1972, with limited exception for public health purposes.

De Minimus Permit – General De Minimus Permit for Discharges to Surface Waters, Order NO. R8-2009-0003, NPDES No. CAG 998001

Design Capture Volume – (See Permit, XII.E.2)

Discretionary Project – Per Section 15357 of the Guidelines for CEQA "Discretionary Project" means a project which requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity, as distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations. A timber harvesting plan submitted to the State Forester for approval under the requirements of the Z'berg-Nejedly Forest Practice Act of 1973 (Pub. Res. Code Sections 4511 et seq.) constitutes a discretionary project within the meaning of the California Environmental Quality Act. Section 21065(c).

Direct Discharge (Table 3a) – A discharge directly from an MS4 to a receiving water such that the MS4 discharge does not first co-mingle with waters from another receiving water or conveyance.

Dry Season/Dry Weather - The season excluding the Wet Season. Generally it will be June 1 through September 30 of each year, unless specifically defined otherwise in a applicable TMDL Implementation Plan.

Effective Impervious Area (EIA) – EIA is the portion of the total impervious area that is directly connected to the drainage collection system. EIA includes street surfaces, paved driveways connecting to the street, rooftops which are hydraulically connected to the curb or storm sewer system, and paved parking lots that drain to a storm sewer system.

Impervious area such as rooftops, streets, sidewalks, and parking areas do not allow water to drain into the soil. Impervious area that collects and drains the water directly to a stream or wetland system via pipes or sheet flow is considered “effective impervious area” because it effectively drains the landscape. Impervious area that drains to landscaped areas, swales, parks and other impervious areas is considered “ineffective” because the water is allowed to infiltrate through the soil and into ground water, without a direct connection to the stream or wetland.

Reducing effective impervious area is defined as disconnecting impervious surfaces such as sidewalks, rooftops, parking areas, and streets, from the drainage system so that runoff percolates into the soil and does not flow directly to streams. Disconnecting the stormwater system allows the watersheds’ hydrologic cycle to respond in a manner that more closely reflects pre-disturbed conditions. EIA reduction can occur as part of new development, redevelopment, or be part of a retrofit design. The level of benefit is determined by how well the practices minimize runoff in small to mid size storm events.

Effectiveness Assessment Outcome Level 1 - Compliance with Activity-based Permit Requirements – Level 1 outcomes are those directly related to the implementation of specific activities prescribed by this Order or established pursuant to it.

Effectiveness Assessment Outcome Level 2 - Changes in Attitudes, Knowledge, and Awareness – Level 2 outcomes are measured as increases in knowledge and awareness among target audiences such as residents, businesses, and municipal employees.

Effectiveness Assessment Outcome Level 3 - Behavioral Change and BMP Implementation – Level 3 outcomes measure the effectiveness of activities in affecting behavioral change and BMP implementation.

Effectiveness Assessment Outcome Level 4 - Load Reductions – Level 4 outcomes measure load reductions which quantify changes in the amounts of pollutants associated with specific sources before and after a BMP or other control measure is employed.

Effectiveness Assessment Outcome Level 5 - Changes in Urban Runoff and Discharge Quality – Level 5 outcomes are measured as changes in one or more specific constituents or stressors in discharges into or from MS4s.

Effectiveness Assessment Outcome Level 6 - Changes in Receiving Water Quality – Level 6 outcomes measure changes to receiving water quality resulting from discharges into and from MS4s, and may be expressed through a variety of means such as compliance with water quality objectives or other regulatory benchmarks, protection of biological integrity, or beneficial use attainment.

Effluent Limitations – means any restriction on quantities, discharge rates, and concentrations of Pollutants which are discharged from Point Sources into Waters of the U.S., waters of the “contiguous zone,” or the ocean (40 CFR 122.2).

Emergency Situation – At a minimum, sewage spills that could impact water contact recreation, all sewage spills above 1,000 gallons, an oil spill that could impact wildlife, a Hazardous Material spill where residents are evacuated, all reportable quantities of Hazardous Waste spills as per 40CFR 117 and 302, and any incident reportable to the OES (1-800-852-7550).

Erosion and Sediment Control Plan (ESCP) – These are water quality protection plans that include control measures for erosion prevention and sediment controls that would minimize the mobilization of sediment from the project site.

ESA – Environmentally Sensitive Area - An area “in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in

an ecosystem and which would be easily disturbed or degraded by human activities and developments" (Reference: California Public Resources Code § 30107.5).

ESAs subject to storm water mitigation requirements are:

1. Areas adjacent to Receiving Waters designated as "Preservation of Biological Habitats of Special Significance (BIOL)", "Spawning, Reproduction, and Development (SPWN)" or "Rare, Threatened, or Endangered Species (RARE)" Beneficial Uses in the Basin Plan;

2. Areas within the MSHCP that contain rare or especially valuable plant or animal life or their habitat. These areas are considered mitigated as the MSHCP contains substantive alternatives analysis for any proposed development that has the potential to impact resources.

3. Areas adjacent to CWA 303(d) Listed Water Bodies or adopted TMDLs with implementation plans that have yet to achieve the Urban WLA or LA goals; and

4. Any other equivalent environmentally sensitive areas which the Permittees have defined.

Executive Officer - The Executive Officer of the Regional Board.

General Construction Permit – State Board Order No. 2009-0009 DWQ (NPDES No. CAS000002) or the most recent draft of the General Construction Permit issued by the State Board subsequent to issuance of this Order.

General Dairy Permit – Regional Board Order No. R8-2007-0001 (NPDES No. CAG018001) for CAFOs.

General De Minimus Discharges Permit – Regional Board Order No. R8-2009-0003.

General Industrial Permit – State Board Order No. 97-03 DWQ (NPDES No. CAS000001) or the most recent General Permit for Storm Water Discharges Associated with Industrial Activities issued by the State Board subsequent to issuance of this Order.

General Storm Water Permits – General Industrial Permit (State Board Order No. 97-03 DWQ, NPDES No. CAS000001) and General Construction Permit (State Board Order No. 2009-0009-DWQ NPDES No. CAS000002), or the most recent applicable General Permit issued by the State Board subsequent to the issuance of this Order.

General Utility Vaults Permit-– State Board Order No. 2006-0008-DWQ, NPDES No. CAG990002.

GIS – Geographical Information System.

Green Infrastructure – Generally refers to technologically feasible and cost-effective systems and practices that use or mimic natural processes to infiltrate, evapotranspirate, or reuse stormwater or runoff on the site where it is generated. This is a concept that highlights the importance of the natural environment in decisions about land use planning. In particular there is an emphasis on the "life support" functions provided by a network of natural ecosystems, with an emphasis on connectivity to support long term sustainability. (Also see Low Impact Development.)

Hazardous Material – 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 the USEPA to be reported if a designated quantity of the material is spilled into the Waters of the U.S. or emitted into the environment.

Hazardous Waste – defined as "any waste, which, under Section 600 of Title 22 of this code, is required to be managed according to Chapter 30 of Division 4.5 of Title 22 of this code." [CCR Title 22, Division 4.5, Chapter 11, Article1]

HCOC – Hydrologic Condition of Concern - 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.

Hydromodification - the "alteration of the hydrologic characteristics of coastal and non-coastal waters, which in turn could cause degradation of water resources."[1] (USEPA 2007)

IC/ID – Illicit Connection/Illegal Discharge

IDDE - Illicit Discharge Detection and Elimination Program

Illegal Discharge –Defined at 40 CFR 122.26(b)(2) as any discharge to the MS4 that is not composed entirely of storm water, except discharges pursuant to an NPDES permit, discharges that are identified in Section VI.A. of this Order, and discharges authorized by the Executive Officer.

Illicit Connection – Any connection to the MS4 that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term Illicit Connection includes all non storm-water discharges and connections except discharges pursuant to an NPDES permit, discharges that are identified in Section V, Effluent Limitations and

[1] USEPA. 2007. *National Management Measures to Control Nonpoint Source Pollution from Hydromodification.* EPA 841-B-07-002. U.S. Environmental Protection Agency, Office of Water, Washington DC

Discharge Specifications, of this Order, and discharges authorized by the Executive Officer.

Impaired – Relates to waterbodies where it is presumed Beneficial Uses are not attained.

Impaired Waterbody / **Impaired Waters** – Section 303(b) of the CWA requires each of California's Regional Water Quality Control Boards 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. The 2006 water quality assessment found a number of water bodies within the Permit Area as Impaired pursuant to Section 303(d). In the Permit Area, these include: Canyon Lake (for pathogens); Lake Elsinore (for PCBs and unknown toxicity); Lake Fulmor (for pathogens); Santa Ana River, Reach 3 (pathogens); and Santa Ana River, Reach 4 (for pathogens).

Impairment – A waterbody condition where Beneficial Uses are not attained.

Implementation Agreement – The Implementation Agreement establishes the responsibilities of each Permittee and a procedure for funding the shared costs.

Impressions – The most common measure is "gross impressions" that includes repetitions. This means if the same person sees an advertisement or hears a radio or sees a TV advertisement a thousand times, that will be counted as 1000 Impressions.

Industrial Facility – Facilities defined in Attachment 1 of the General Industrial Permit. These facilities are also addressed by the CAP or equivalent as described in Section 8.1 of the DAMP.

LA – [Load Allocations] – Distribution or assignment of TMDL Pollutant loads to entities or sources for existing and future Non-Point Sources, including background loads.

Land Disturbance – The clearing, grading, excavation, stockpiling, or other construction activity that result in the possible mobilization of soils or other Pollutants into the MS4. This specifically does not include routine maintenance activity to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. This also does not include emergency construction activities required to protect public health and safety. The Permittees should first confirm with Regional Board staff if they believe that a particular routine maintenance activity is exempt under this definition from the General Construction Permit or other Orders issued by the Regional Board.

Local Implementation Plan (LIP) – Document describing an individual Permittee's procedures, ordinances, databases, plans, and reporting materials for compliance with the MS4 Permit.

Low Impact Development (LID) – Comprises a set of technologically feasible and cost-effective approaches to storm water management and land development that combines a hydrologically functional site design with Pollution Prevention measures to compensate for land development impacts on hydrology and water quality. LID techniques mimic the site's predevelopment hydrology by using site design techniques that store, infiltrate, evapotranspire, bio-treat, bio-filter, bio-retain or detain runoff close to its source.

Major Outfall – Outfalls with a pipe diameter of 36 inches or greater or drainage areas draining 50 acres or more.

Management Steering Committee – Committee to address Urban Runoff management policies for the Permit Area and coordinate the review and necessary revisions of the DAMP and Implementation Agreement. The Management Steering Committee consists of one or more city manager or equivalent representatives from each Permittee.

MEP [Maximum Extent Practicable] MEP is an acronym for "Maximum Extent Practicable" and refers to the standard for implementation of storm water management programs.
Section 402(p)(3)(B)(iii) of the Clean Water Act requires that municipal storm water 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."

In practice, compliance with the MEP standard is evaluated by how well the Permittees implement the "minimum measures" identified by EPA, including: (1)Public education and outreach on storm water impacts; (2) Public involvement/participation; (3) Illicit discharge detection and elimination; (4) Construction site storm water runoff control; (5) Post-construction storm water management in new development and redevelopment; and (6) Pollution prevention/good housekeeping for municipal operations. Collectively, these minimum measures are often referred to as "Best Management Practices" or BMPs. The MEP standard does not require Permittees to reduce pollutant concentrations below natural background levels, nor does it require further reductions where pollutant concentrations in the receiving water already meet water quality objectives. In implementing the MEP standard, it is appropriate for Permittees to prioritize their resource allocation to address the storm water pollution problems that pose the greatest and most immediate threat to human health or the environment.

MEP is a technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) that operators of MS4s must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source control and treatment control BMPs. MEP

generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than BAT. A definition for MEP is not provided either in the statute or in the regulations. Instead the 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 urban runoff management programs. Their total collective and individual activities conducted pursuant to the urban runoff management programs 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 MS4 maintenance). In the absence of a proposal acceptable to the Regional Board, the Regional Board defines MEP.

In a memo dated February 11, 1993, entitled "Definition of Maximum Extent Practicable," Elizabeth Jennings, Senior Staff Counsel, SWRCB addressed the achievement of the MEP standard as follows:

“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. The major emphasis is on technical feasibility. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPS only where other effective BMPS will serve the same purpose or the BMPS would not be technically feasible, or the cost would be prohibitive. In selecting BMPS to achieve the MEP standard, the following factors may e useful to consider:

a. Effectiveness: Will the BMPS address a pollutant (or pollutant source) of concern?

b. Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?

c. Public Acceptance: Does the BMP have public support?

d. Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?

e. Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc?

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. If a municipality reviews a lengthy menu of BMPS and chooses to select only a few of the least expensive, it is likely that MEP has not been met. On the other hand, if a municipal discharger 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 derived, it would have met the standard. Where a choice may be made between two BMPS that should provide generally comparable

effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPS that would address a pollutant source, or to pick a BMP base solely on cost, which would be clearly less effective. In selecting BMPS the municipality must make a serious attempt to comply and practical solutions may not be lightly rejected. In any case, the burden would be on the municipal discharger to show compliance with its permit. After selecting a menu of BMPS, it is the responsibility of the discharger to ensure that all BMPS are implemented."

Ministerial – Per Section 15369 of the CEQA Guidelines, Ministerial describes a governmental decision involving little or no personal judgment by the public official as to the wisdom or manner of carrying out the project. The public official merely applies the law to the facts as presented but uses no special discretion or judgment in reaching a decision. A ministerial decision involves only the use of fixed standards or objective measurements, and the public official cannot use personal, subjective judgment in deciding whether or how the project should be carried out. Common examples of ministerial permits include automobile registrations, dog licenses, and marriage licenses. A building permit is ministerial if the ordinance requiring the permit limits the public official to determining whether the zoning allows the structure to be built in the requested location, the structure would meet the strength requirements in the Uniform Building Code, and the applicant has paid his fee.

MSAR – Middle Santa Ana River

MSHCP – Western Riverside County Multiple Species Habitat Conservation Plan

MS4 – **[Municipal Separate Storm Sewer System]** – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, natural drainage features or channels, modified natural channels, 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 designated and approved management agency under section 208 of the CWA that discharges to Waters of the U.S.; (ii) Designated or used for collecting of conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the POTW as defined at 40 CFR 122.2.

New Development – The categories of development identified in Section XI.D of this Order. New Development does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of a facility, nor does it include emergency New Development required to protect public health and safety. Dischargers should confirm with Regional Board staff whether or not a particular routine maintenance activity is subject to this Order.

New Urbanism – New Urbanism 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. This is based on principles of planning and architecture that work together to create human-scale, walkable communities that preserve natural resources.

NOI [Notice of Intent] – A NOI is an application for coverage under the General Storm Water Permits.

Non-Point Source – Refers to diffuse, widespread sources of Pollution. These sources may be large or small, but are generally numerous throughout a watershed. Non-Point Sources, include but are not limited to urban, agricultural or industrial area, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining, livestock grazing, as well as physical changes to stream channels, and habitat degradation. Non-Point Source Pollution can occur year round any time rainfall, snowmelt, irrigation, or any other source of water runs over land or through the ground, picks up Pollutants from these numerous, diffuse sources and deposits them into rivers, lakes and coastal waters or introduces them into groundwater.

Non-storm Water – All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges to a MS4 other than storm water). Non-storm Water includes Illicit Discharges, non-prohibited discharges and NPDES permitted discharges.

NOT - Notice of Termination – Formal notice to the Regional Board of intent to terminate water discharge for projects covered under a General Stormwater Permit.

NPDES [National Pollutant Discharge Elimination System] – Permits issued under Section 402(p) of the CWA for regulating discharge of Pollutants to Waters of the U.S.

Nuisance – As defined in the Porter-Cologne Water Quality Control Act a Nuisance is "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."

Numeric Effluent Limitations – A quantitative limitation on Pollutant concentrations or levels to protect Beneficial Uses and Water Quality Objectives of a water body. When Numeric Effluent Limits are met at the "end-of-pipe," the effluent discharge generally will not cause Water Quality Standards to be exceeded in the receiving waters (i.e., Water Quality Standards will also be met).

Nurdles – A plastic pellet, also known as pre-production plastic pellet or plastic resin pellet.

NURP - National Urban Runoff Program

OES – The Governor's Office of Emergency Services, an agency of the State of California.

"Only Rain Down The Storm Drain" Pollution Prevention Program – County Urban Runoff public education program.

Open Space – Any parcel or area of land or water that is essentially unimproved or devoted to an open-space use for the purposes of (1) the preservation of natural resources, (2) the managed production of resources, (3) outdoor recreation, or (4) public health and safety. [Riverside County General Plan, adopted October 7, 2003. Technical Appendix A , Glossary]

Order – Order No. R8-2010-0033 (NPDES No. CAS618033)

Outfall – Means a Point Source as defined by 40 CFR 122.2 a, the point where a municipal separate storm sewer discharges to Waters of the U.S. 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 U.S. and are used to convey Waters of the U.S.. [40 CFR 122.26 (b)(9)]

PAHs – Polycyclic aromatic hydrocarbons. PAHs occur in oil, coal, and tar deposits, and are produced as byproducts of fuel burning (whether fossil fuel or biomass). As a Pollutant, they are of concern because some compounds have been identified as carcinogenic, mutagenic, and teratogenic. PAHs are also found in foods.

Party – Defined as an individual, association, partnership, corporation, municipality, state or federal agency, or an agent or employee thereof. [40 CFR 122.2]

PCBs – Polychlorinated biphenyls. Due to PCB's toxicity and classification as persistent organic Pollutants, PCB production was banned by the United States Congress in 1976 and by the Stockholm Convention on Persistent Organic Pollutants in 2001.

Permit Area – In the Santa Ana Region, the portion of the Santa Ana River watershed that is within the County and regulated under the MS4 Permit. The Permit Area is identified on Appendix 1 as "Permittee Urban Area" and those areas under the Permittee's jurisdictions designated as "Agriculture" and "Open Space" on Appendix 1 that will convert to Permittee Urban Area when developed to industrial, commercial, or residential use during the term of the Order.

Permittees – Co-Permittees and the Principal Permittee

Point Source – 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 operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged.

Pollutant – Broadly defined as any agent that may cause or contribute to the degradation of water quality such that a condition of Pollution or Contamination is created or aggravated.

Pollutants of Concern –Pollutants expected to be present on the project site. In developing this list, consideration should be given to the chemicals and potential Pollutants available for storm water to pick-up or transport to Receiving Waters and legacy Pollutants at the project site. Pollutants of Concern for New Development and Significant Redevelopment projects are those Pollutants identified above for which a downstream water body is also listed as Impaired under the CWA Section 303(d) list or by a TMDL.

Pollution – As defined in the Porter-Cologne Water Quality Control Act, Pollution is the alteration of the quality of the Waters of the U.S. by Waste, to a degree that unreasonably affects either of the following: A) the waters for Beneficial Uses (i.e., when the Water Quality Objectives have been violated); or B) facilities that serve these Beneficial Uses. Pollution may include Contamination.

Pollution Prevention –Defined as practices and processes that reduce or eliminate the generation of Pollutants, in contrast to Source Control, Pollution Control, Treatment Control BMPs, or disposal.

Post-Construction BMPs – A subset of BMPs including Site Design, Source Control, and Treatment Control BMPs which detain, retain, filter or educate to prevent the release of Pollutants to surface waters during the final functional life of development.

POTW – [Publicly Owned Treatment Works] – Wastewater treatment facilities owned by a public agency.

Principal Permittee – Riverside County Flood Control and Water Conservation District [RCFC&WCD].

Public Education Committee – Committee established by the Permittees to provide oversight and guidance for the implementation of the public education program.

QAPP - Quality Assurance Project Plan

Rainy Season – See Wet Season.

RCFC&WCD – Riverside County Flood Control and Water Conservation District

REC – Recreational Beneficial Use.

Receiving Water(s) – Waters of the U.S.within the Permit Area.

Receiving Water Limitations – Requirements included in the Orders issued by the Regional Boards to assure that the regulated discharges do not violate Water Quality Standards established in the Basin Plan at the point of discharge to Waters of the U.S. Receiving Water Limitations are used to implement the requirement of CWA section 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet Water Quality Standards.

Receiving Water Quality Objectives – Water Quality Objectives specified in the Basin Plan for Receiving Waters.

Region – The portion of the Santa Ana River watershed within Riverside County.

Regional Board – California Regional Water Quality Control Board, Santa Ana Region.

RGO – Retail gasoline outlet

Riverside County – Territory within the geographical boundaries of the County.

ROWD [Report of Waste Discharge] – Application for issuance or re-issuance of WDRs.

Sanitary Sewer Overflow (SSO) – Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system.

Santa Ana Region – Area under the jurisdiction of the Regional Board.

SARA – Superfund Amendments and Reauthorization Act. SARA amended the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) on October 17, 1986. SARA reflected USEPA's experience in administering the complex Superfund program during its first six years and made several important changes and additions to the program. SARA:

- stressed the importance of permanent remedies and innovative treatment technologies in cleaning up Hazardous Waste sites;
- required Superfund actions to consider the standards and requirements found in other State and Federal environmental laws and regulations;
- provided new enforcement authorities and settlement tools;

- increased State involvement in every phase of the Superfund program;
- increased the focus on human health problems posed by Hazardous Waste sites;
- encouraged greater citizen participation in making decisions on how sites should be cleaned up; and
- increased the size of the trust fund to $8.5 billion.

SARA also required USEPA to revise the Hazard Ranking System (HRS) to ensure that it accurately assessed the relative degree of risk to human health and the environment posed by uncontrolled Hazardous Waste sites that may be placed on the National Priorities List (NPL).

SAWBAA – Santa Ana Watershed Benefit Assessment Area

SCCWRP – Southern California Coastal Water Research Project

Sediment – Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human induced land disturbance activities) is considered a Pollutant. This Order regulates only the discharges of Sediment from anthropogenic sources and does not regulate naturally occurring sources of Sediment. Sediment may destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

SIC [Standard Industrial Classification] – Four digit industry code, as defined by the US Department of Labor, Occupational Safety and Health Administration. The SIC Code is used to identify if a facility requires coverage under the General Industrial Activities Storm Water Permit.

Significant Redevelopment – As defined in Section XI.D.3.a.

SIP - Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California

Site Design BMPs – Any project design feature that reduces the creation or severity of potential pollutant sources or reduces the alteration of the project site's natural flow regime. Redevelopment projects that are undertaken to remove Pollutant sources (such as existing surface parking lots and other impervious surfaces) or to reduce the need for new roads and other impervious surfaces (as compared to conventional or low-density New Development) by incorporating higher densities and/or mixed land uses into the project design, are also considered site design BMPs

Smart Growth Principles – 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.

SMC - Storm Water Monitoring Coalition

Source Control BMPs – In general, activities or programs to educate the public or provide low cost non-physical solutions, as well as facility design or practices aimed to limit the contact between Pollutant sources and storm water or authorized Non-Storm Water. Examples include: activity schedules, prohibitions of practices, street sweeping, facility maintenance, detection and elimination of IC/IDs, and other non-structural measures. Facility design (structural) examples include providing attached lids to trash containers, canopies for fueling islands, secondary containment, or roof or awning over material and trash storage areas to prevent direct contact between water and Pollutants.

Southern California Monitoring Coalition (SMC) - A regional group working to improve monitoring program design, parameter test methods, calibrate labs, evaluate the effectiveness of BMPs, and/or advance the science and understanding of Urban Runoff impacts on Receiving Waters.

SSMP – Sewer System Management Plan

SSO Order – Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ.

State Board – California State Water Resources Control Board

Storm Water – Storm water runoff and snow melt runoff from urban, open space, and agricultural areas consisting only of those discharges that originate from precipitation events. Storm water is that portion of precipitation that flows across a surface to the MS4 or receiving waters. Examples of this phenomenon include: the water that flows off a building's roof when it rains (runoff from an impervious surface); the water that flows into streams when snow on the ground begins to melt (runoff from a semi-pervious surface); and the water that flows from a vegetated surface when rainfall is in excess of the rate at which it can infiltrate into the underlying soil (runoff from a pervious surface). When all other factors are equal, runoff increases as the perviousness of a surface decreases. During precipitation events in urban areas, rain water may pick up and transports Pollutants through storm water conveyance systems, and ultimately to Waters of the U.S.

Storm Water Ordinance – The Storm Water/Urban Runoff Management and Discharge Control Ordinances and ordinances addressing grading and erosion control adopted by each of the Co-Permittees.

Structural BMPs – Physical facilities or controls that may include secondary containment, treatment measures, (e.g. first flush diversion, detention/retention basins, and oil/grease separators), run-off controls (e.g., grass swales, infiltration trenches/basins, etc.), and engineering and design modification of existing structures.

Subdivision Map Act - Section 65000 et seq. of the California Government Code

SWAMP - Surface Water Ambient Monitoring Program

SWPPP [Storm Water Pollution Prevention Plan] – Plan required by the General Construction Permit to minimize and manage Pollutants to minimize Pollution from entering the MS4, identifying all potential sources of Pollution and describing planned practices to reduce Pollutants from discharging off the site.

SWQSTF – Storm Water Quality Standards Task Force

TDS – Total dissolved solids.

Technical Committee – A committee consisting of one or more representatives from each Permittee that provides technical direction on the development of the DAMP and the implementation of the overall Urban Runoff program.

Technology-Based Effluent Limitations – A permit limit for a Pollutant that is based on the capability of a treatment method to reduce the Pollutant to a certain concentration.

TIN – Total Inorganic Nitrogen

TMDL [Total Maximum Daily Load] – Maximum amount of a Pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain Water Quality Standards. Under CWA Section 303(d), TMDLs must be developed for all water bodies that do not meet Water Quality Standards after application of technology-based controls.

TMDL Implementation Plan – Component of a TMDL that describes actions, including monitoring, needed to reduce Pollutant loadings and a timeline for implementation. TMDL Implementation Plans can include a monitoring or modeling plan and milestones for measuring progress, plans for revising the TMDL if progress toward cleaning up the waters is not made, and the date by which Water Quality Standards will be met (USEPA Final TMDL Rule: Fulfilling the Goals of the CWA, EPA 841-F-00-008, July 2000).

Toxic Substance – A substance that can cause Toxicity.

Toxicity – Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Treatment Control BMPs – Any engineered system designed and constructed to remove Pollutants from Urban Runoff. Pollutant removal is achieved by simple gravity

settling of particulate Pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process.

Tributary – a stream, river, or MS4 which flows into downstream receiving water, MS4 or BMP.

TSS – Total suspended solids.

Uncontaminated Pumped Groundwater – Groundwater that meets the surface Water Quality Objectives specified in the Basin Plan to which it is proposed to be discharged.

Urban Runoff – Urban Runoff includes those discharges from residential, commercial, industrial, and construction areas within the Permit Area and excludes discharges from Open Space[2], feedlots, dairies, farms and agricultural fields. Urban Runoff discharges consist of storm water and non-storm water surface runoff from drainage sub-areas with various, often mixed, land uses within all of the hydrologic drainage areas that discharge into the Waters of the U.S. In addition to Urban Runoff, the MS4s regulated by this Order receive flows from Open Space, agricultural activities, agricultural fields state and federal properties and other non-urban land uses not under the control of the Permittees. The quality of the discharges from the MS4s 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.

The Permittees lack legal jurisdiction over storm water discharges into their respective MS4 facilities from agricultural activities, California and federal facilities, utilities and special districts, Native American tribal lands, wastewater management agencies and other point and non-point source discharges otherwise permitted by or under the jurisdiction of 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 are beyond the ability of the Permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, leaching of naturally occurring minerals from local geography. Urban Runoff does not include background Pollutant loads or naturally occurring flows.

USEP – Urban Source Evaluation Plan for the MSAR TMDL.

USEPA – United States Environmental Protection Agency.

[2] This use of Open Space excludes Open Space integrated into urbanized areas such as pocket parks, landscaped medians, walking trails, etc. Open Space is intended to address essentially unimproved areas in strictly unurbanized settings.

Waste – As defined in Water Code Section 13050(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." Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system that applies to solid and semi-solid waste that cannot be discharged directly or indirectly to waters of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, non-hazardous solid waste, and inert waste.

Waste Discharge Requirements (WDRs) – As defined in Section 13374 of the California Water Code, the term "Waste Discharge Requirements" is the equivalent of the term "permits" as used in the Federal Water Pollution Control Act, as amended. The Regional Board usually reserves reference to the term "permit" to Waste Discharge Requirements for discharges to surface Waters of the U.S.

Waste Load Allocations (WLAs)– Maximum quantity of Pollutants a discharger of waste is allowed to release into a particular waterway, as set by a regulatory authority. Discharge limits usually are required for each specific water quality criterion being, or expected to be, violated. Distribution or assignment of TMDL Pollutant loads to entities or sources for existing and future Point Sources.

WQBEL – Water Quality Based Effluent Limitations

Water Code – California Water Code

Waters of the U.S. – Waters of the U.S. can be broadly defined as navigable surface waters and all tributary surface waters to navigable surface waters. Groundwater is not considered to be a Waters of the U.S. As defined in 40 CFR 122.2, the Waters of the U.S. are defined as: (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 U.S. under this definition; (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)

through (f) of this definition. Waters of the U.S. 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 CWA, the final authority regarding CWA jurisdiction remains with the USEPA.

Water Quality Objectives – Means the numeric or narrative 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. [California Water Code Section 13050(h)]

Water Quality Standards –The water quality goals of a waterbody (or a portion of the waterbody) designating Beneficial Uses to be made of the water and the Water Quality Objectives or criteria necessary to protect those uses. These standards also include California's anti-degradation policy.

Watershed – That geographical area which drains to a specified point on a watercourse, usually a confluence of streams or rivers (also known as drainage area, catchments, or river basin).

Watershed Action Plan (WAP) – Integrated plans for managing a watershed that include consideration of water quality, Hydromodification, water supply and habitat protection. 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 Permit Area. The Watershed Action Plan should integrate Hydromodification and water quality management strategies with land use planning policies, ordinances, and plans within each jurisdiction.

WDID [Waste Discharge Identification] – Identification number provided by the State when a Notice of Intent is filed.

Wet Season/Wet Weather – October 1 through May 31st of each year unless defined otherwise in the specific applicable TMDL implementation plan. The Middle Santa Ana River TMDL defines the wet season as November 1 through March 31st and the Canyon Lake/Lake Elsinore TMDL monitoring defines it as October 1st through May 31st.

WQMP – Water Quality Management Plan as discussed in Section 6 of the DAMP.

WRCOG - Western Riverside Council of Governments

APPENDIX 5

NOTICE OF INTENT AND NOTICE OF TERMINATION FOR MUNICIPAL CONSTRUCTION ACTIVITIES

ORDER NO. R8-2010-0033

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – SANTA ANA REGION

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF THE RIVERSIDE COUNTY MUNICIPAL STORMWATER PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

ORDER No. R8-2010-0033 (NPDES No. CAS618033)

MARK ONLY ONE ITEM 1. ☐ New Construction/Reconstruction 2. ☐ Change of Information for WDID# _____

I. OWNER

Name	Contact Person		
Mailing Address	Title		
City	State **CA**	Zip	Phone ( ) – Fax ( ) – Email :

II. CONTRACTOR INFORMATION

Name	Contact Person		
Local Mailing Address	Title		
City	State	Zip	Phone ( ) – Fax ( ) – Email:

III. SITE INFORMATION

A. Project Title	Site Address		
City/Unincorporated Area	State **CA**	Zip	Contact Person Phone ( ) –
B. Construction commencement date: (Month / Day / Year)	C. Projected construction completion date: (Month / Day / Year)		

D. Type of Work: ☐ Utility ☐ Flood Control ☐ Transportation ☐ Other (Specify) Description of Work: _____	E. Total size of project/construction site: ____Acres Total size of area to be disturbed:_ ____Acres.

IV. RECEIVING WATER INFORMATION

A. Does the storm water runoff from the construction site discharge to (check all that apply):

1. ☐ Indirectly to Waters of the U.S.
2. ☐ MS4 Facility - Enter owner's name:_____
3. ☐ Directly to Waters of U.S. (e.g. , river, lake, creek, stream, or to a pipe/channel that flows without inflow from other sources between site and water body etc.)

V. IMPLEMENTATION OF NPDES PERMIT REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (mark one) ☐ A SWPPP has been prepared for this project and is available for review ☐ A SWPPP will be prepared and ready for review by (date): ___/___/___ B. Date WQMP approved by MS4 Permittee: ___/___/___ ☐ Not Applicable.	C. MONITORING PROGRAM (MP) (mark one) ☐ A MP has been prepared for this facility and is available for review ☐ A MP will be prepared and ready for review by (date): ___/___/___

VI. CERTIFICATIONS

"I certify under penalty of law that this document and all attachments were prepared under my direction and 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 or imprisonment. In addition, I certify that Order No. R8-2010-0033; (specifically Sections XII.F., XIV, XVI, and XX), including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with."

Printed Name: _____ **Title:** _____

Signature: _____ **Date:** _____

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – SANTA ANA REGION

NOTICE OF TERMINATION

OF COVERAGE UNDER THE RIVERSIDE COUNTY MUNICIPAL STORMWATER PERMIT
FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY

ORDER No. R8-2010-0033 (NPDES No. CAS618033)

I. WDID No. _____

II. OWNER

Name	Contact Person		
Mailing Address	Title		
City	State	Zip	Phone ( ) – Fax ( ) – Email:

III. SITE INFORMATION

A. Original Project Title	Site Address			
City/Unincorporated Area	State CA	Zip	Site Contact Person	
B. Contractor Name	Phone ( ) – Fax ( ) – Email:		Title	
Local Mailing Address	City		State	Zip
Qualified SWPPP Practitioner	Phone ( ) – Fax ( ) – Email:			

IV. BASIS OF TERMINATION

___ 1. The construction project is completed and the following conditions have been met.

- ☐ All elements of the Storm Water Pollution Prevention Plan have been completed.
- ☐ Construction materials and waste have been disposed of properly.
- ☐ The site is in compliance with all local storm water management requirements.
- ☐ A post-construction storm water operation and management plan is in place (Attach a description of the post construction BMPs, the location (Latitude /Longitude), and a map of the locations of the post construction BMPs).
- ☐ Date field verification inspection performed and include a copy of the field verification report. ___/___/___

___ 2. Construction activities have been suspended; either temporarily ____ or indefinitely ___ and the following conditions have been met.

- All elements of the Storm Water Pollution Prevention Plan have been completed.
- ☐ Construction materials and waste have been disposed of properly.
- ☐ The site is permanently stabilized (greater than 3 years without maintenance).
- ☐ The site is in compliance with all local storm water management requirements.

Date of suspension ____ / ____ / ____ Expected start up date ____ / ____ / ____

V. CERTIFICATION

I certify under penalty of law that all storm water discharges associated with construction activity from the identified site that are authorized by NPDES General Permit No. CAS000002 have been eliminated or that I am no longer the owner of the site. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge storm water associated with construction activity under the General Permit, and that discharging pollutants in storm water associated with construction activity to Waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this Notice of Termination does not release an owner of liability for any violation of the General Permit or the Clean Water Act.

Printed Name: _____ **Title:** _____

Signature: _____ **Date:** _____

APPENDIX 6

FACT SHEET

ORDER NO. R8-2010-0033

State of California

California Regional Water Quality Control Board

Santa Ana Region

3737 Main Street, Suite 500

Riverside, CA 92501- 3348

FACT SHEET

January 29, 2010

ITEM: 09

SUBJECT: 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, Urban Runoff Management Program, Order No. R8-2010-0033 (NPDES No. CAS 618033)

I. INTRODUCTION

A. PROJECT

The attached pages contain information concerning an application for renewal of Waste Discharge Requirements and a National Pollutant Discharge Elimination System (NPDES) permit, Order No. R8-2010-0033 (Order), NPDES No. CAS 618033, which prescribes Waste Discharge Requirements for Urban Runoff (as defined in Appendix 4) from the cities and the unincorporated areas in Riverside County within the jurisdiction of the Santa Ana Regional Board Water Quality Control Board (Regional Board). This Order regulates discharges of Urban Runoff from the Permit Area, as defined in Order No. R8-2010-0033 and shown in Appendix 1.

If appropriate Pollution control measures are not implemented, Urban Runoff, (as defined in Appendix 4 – Glossary), 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 may change the stream hydrology and increase Pollutant loading to Receiving Waters. As a watershed undergoes urbanization, pervious surface area decreases, runoff volume and velocity may increase, riparian habitats and wetland habitats decrease, the frequency and severity of flooding may increase, and Pollutant loading may increase. Most of these impacts occur due to human activities (Anthropogenic) that occur during and/or after urbanization. The Pollutants and hydrologic changes may

cause declines in aquatic resources, cause toxicity to aquatic organisms, and impact human health and the environment. Based on information provided in Section D of the Riverside County Flood Control and Water Conservation District's (RCFC&WCD or the Principal Permittee as context indicates) Hydrology Manual, it is feasible that, in semi-arid regions, development may result in the creation of a net increase in absorption.

Properly planned high-density development may reduce urban sprawl and problems associated with sprawl. Urban in-fill and high-density development are elements of smart growth, which creates the opportunity to maintain relatively natural open space elsewhere in the Permit Area (see Appendix 4). The goal of Low Impact Development (LID) is to mimic pre-development runoff quality and quantity.

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 NPDES Application No. CAS 618033, a Report of Waste Discharge (the ROWD) and a revised Drainage Area Management Plan (DAMP) to renew the Municipal Separate Storm Sewer System (MS4) NPDES permit for the Santa Ana River watershed (the Permit Area) within Riverside County. This Order renews the NPDES permit authorizing Urban Runoff in the Permit Area (see Appendix 1, "urban area" includes those portions of "agriculture" and "open space" that convert to industrial, commercial, or residential use during the term of this Order). 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 will continue as the Co-Permittees.

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. On May 6, 2009, the City of Menifee and on May 5, 2009, the City of Wildomar submitted Letters of Intent to be a Co-Permittee in this Order and for the purposes of this Order shall be considered as such. The cities in the Permit Area, along with the County, are collectively referred to as the Co-Permittees, and collectively, with the Principal Permittee, the Permittees.

B. PROJECT AREA

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 California Department of Finance estimates that as of January 1,

2006, the population of Riverside County is 1,953,330 of which 1,237,388[1] reside within the Permit Area. The California Department of Finance estimates that as of January 1, 2009, the population of Riverside County was 2,107,653[2]. Beaumont, Calimesa, and Canyon Lake have populations of 25,000 or less. The County, Corona, Moreno Valley and Riverside have populations of 100,000 or more. The Southern California Association of Governments estimates that the County of Riverside will grow by 16% between 2006 and 2010 (2008 RTP Growth Forecast by City). The most significant percentage growth in population between 2006 and 2010 occurred in the Cities of Beaumont, Calimesa, and San Jacinto.

Land uses in Riverside County within the Santa Ana River Region include open space, residential, commercial, light industrial, heavy industrial, and agriculture. The agricultural land uses include row crops, nurseries, citrus groves and vineyards, dairies, ranches, poultry and hog farms, and other agricultural related uses with one single-family residence allowed per 10 acres (County of Riverside General Plan, Land Use Element 2003). The conversion of agricultural lands and open space to other "developed" land uses has been ongoing and will continue. Based on Riverside County Assessor's Parcel Data as of February 2006, the land use mix of the County area within the Santa Ana Region was: 29,441 acres used or zoned for commercial/industrial purposes (3.3%), 70,499 acres for residential purposes (7.9%), 11,798 acres utilized for improved streets and roads (1.3%), 9,872 acres are used for parks and recreational facilities (1.1%), 70,164 acres are used for rural residential (7.9%), 453,976 acres are utilized for open space (50.8%), and 48,627 acres are used for agricultural purposes (5.4%). The federal, state, tribal, and non-Permittee jurisdictional lands within the portion of Riverside County within the Santa Ana Region total 199,064 acres (22.3%).

Less than one fifth (1/5) of Riverside County is within the Permit Area. The Permit Area includes the "urban area" as shown in Appendix 1 and those portions of "agriculture" and "open space" as shown on Appendix 1 that do convert to industrial, commercial or residential use during the term of this Order. The Permit Area is delineated by the San Bernardino-Riverside County boundary line on the north and northwest, the Orange-Riverside County boundary line on the west, the Santa Ana-San Diego Regional Board boundary line on the south, and the Santa Ana-Colorado River Basin Regional Board boundary line on the east. Sixty-seven percent of Riverside County's population resides within the Regional Board's jurisdiction. The San Diego and the Colorado River Basin Regional Water Quality Control Boards regulate Urban Runoff from those portions of Riverside County outside of the Permit Area shown in Appendix 1.

[1] As per Section 3.3.1 of the 2007 ROWD, (Western Riverside Council of Governments (WRCOG), excluding the cities of Menifee and Wildomar
[2] 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).

C. CLEAN WATER ACT REQUIREMENTS

The federal Clean Water Act (the "CWA") 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 "Waters of the U.S.". 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.

The National Urban Runoff Program (NURP) final report to the Congress (USEPA, 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 Runoff. Pursuant to these amendments, the Santa Ana Regional Board began regulating discharges from MS4s in 1990.

II. REGULATORY BACKGROUND AND CLEAN WATER ACT REQUIREMENTS

As water flows over streets, parking lots, construction sites, and industrial, commercial, residential, and municipal areas, it may intercept Pollutants from these areas and transport them to Waters of the U.S.. As indicated in I.A, above, Urban Runoff may contain pathogens, sediment, trash, fertilizers, oxygen-demanding substances, pesticides, heavy metals, and petroleum products. If not properly managed and controlled, urbanization may adversely impact water quality and quantity in the receiving waters.

However, urban development projects that incorporate LID concepts may reduce the impact of urban development on runoff water quality and quantity.

Studies[3] conducted in the Southern California area have established storm water runoff from urban areas as significant sources of Pollutants in surface waters. The Santa Ana River is impacted by agricultural, other discharges and Urban Runoff as it flows through the San Bernardino County and Riverside County areas prior to flowing through Orange County and into the Pacific Ocean.

If not properly controlled, Urban Runoff could be a significant source of Pollutants in the Waters of the U.S. Table 1 includes a list of Pollutants, potential sources, and some of the adverse environmental consequences mostly resulting from urbanization.

[3] 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. Southern California Coastal Water Research Project (1992), Surface Runoff to the Southern California Bight.

Table 1[4]
Pollutant Sources and Impacts of a Number of Pollutants On Waters of the U.S.

Pollutants	Sources	Effects and Trends
Toxins (e.g., biocides, PCBs, trace metals, heavy metals)	Industrial and municipal wastewater; 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 Waters of the U.S. have declined, but remaining inputs and contaminated sediments in urban and industrial areas pose threats to living resources.
Pesticides (DDT, diazinon, chlorpyrifos)	Urban Runoff, agricultural runoff, commercial, industrial, residential and farm use	The use of legacy pesticides (DDT, chlordane, dieldrin) has been banned or restricted; 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, and alter food chains supporting fisheries. While organic waste loading has decreased, nutrient loading has increased (NRC, 1993a, 2000a).
Petroleum products (oil, grease, petroleum hydrocarbons, PAHs)	Urban Runoff and atmospheric deposition from land activities; accidental spills; oil & gas production activities; natural seepage; and PAHs from internal combustion engines	Petroleum hydrocarbons can affect bottom organisms and larvae; spills affect birds, mammals and aquatic life. While oil Pollution from accidental spills and production activities has decreased, diffuse inputs from land-based activities have not (NRC, 1985).
Radioactive isotopes	Atmospheric fallout, industrial and military activities	Bioaccumulation may pose human health risks where contamination is heavy.
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.
Plastics and other debris	Ships, boats, fishing nets, containers, trash, Urban Runoff	Entangles aquatic life or is ingested; degrades, beaches, lake shores, near shore habitats, and wetland 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 run off from impervious surfaces	Kills some temperature-sensitive species; and 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, and discharges from boats and cruise ships.	Pose health risks to swimmers and consumers of aquatic life. Sanitation has improved, but standards have been raised (NRC 1999a).
Alien species	Ships and ballast water, fishery stocking, aquarists	Displace native species, introduce new diseases; growing worldwide problem (NRC 1996).

[4] Adapted from "Marine Pollution in the United States" prepared for the Pew Oceans Commission, 2001.

The 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 MS4s and industrial facilities, including construction sites, to obtain NPDES permits for storm water runoff from their facilities. On November 16, 1990, the USEPA promulgated the final NPDES Phase I storm water regulations. The storm water regulations are contained in 40 CFR Parts 122, 123 and 124.This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under federal Clean Water Act section 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B).) This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (*Natural Resources Defense Council, Inc. v. U.S.E.P.A.* (9th Cir. 1992) 966 F.2d 1292, 1308, fn.17). The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (*cf. Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, the provisions of this Order to implement total maximum daily loads (TMDLs) are federal mandates. The federal Clean Water Act requires TMDLs to be developed for water bodies that do not meet federal water quality standards. (33 U.S.C. § 1313(d).) Once the U.S. Environmental Protection Agency or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation. (40 C.F.R. § 122.44(d)(1)(vii)(B).)

Second, the local agency permittees' obligations 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. With a few inapplicable exceptions, the Clean Water Act regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the

discharge of waste (Wat. Code, § 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The Clean Water Act and the Porter-Cologne Water Quality Control Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Resources Control Board decisions, this Order does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Order, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the local agency permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have 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 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. To the extent, the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.) Likewise, the Permittees have voluntarily sought a program-based municipal storm water permit in lieu of a numeric limits approach. (See *City of Abilene v. U.S. E.P.A.* (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The local agencies' voluntary decision to file a report of waste discharge proposing a program-based

permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIIIB, Section (6) of the California Constitution.

On July 13, 1990, the Regional Board adopted the first term Riverside County Area-wide MS4 Permit, Order No. 90-104 (NPDES No. CA 8000192), for Urban Runoff from areas in Riverside County within the Permit Area. On March 8, 1996, the Regional Board renewed Order No. 90-104 by adopting the second term area-wide 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 area-wide MS4 Permit, Order No. R8-2002-0011.

This Order renews the area-wide NPDES MS4 Permit for the Permit Area for the fourth-term, 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 Water Resources Control Board's (State Board) Plans and Policies.

The Basin Plan is the basis for the Regional Board's regulatory programs. The Basin Plan was developed and is periodically reviewed and updated in accordance with relevant federal and state law and regulation, including the CWA 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 anti-degradation policy, comprise federal "Water Quality Standard"). 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, 1983, and 1995 Basin Plans. The 1995 Basin Plan was updated in February 2008[5]. Amendments to the Basin Plan included new nitrate-nitrogen and TDS objectives for specified

[5] http://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml

management zones, new nitrogen and TDS management strategies applicable to both surface and ground waters and various Total Maximum Daily Loads (TMDLs) and TMDL Implementation Plans that had been adopted for Impaired Waterbodies within the region.

Water Code Section 13241 requires that certain factors must be considered when Water Quality Objectives are established. These factors include economics and the need for developing housing in the Region. During the 2002 MS4 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 Runoff. During the 2006 review of the Basin Plan, this matter was incorporated on the triennial review list. To begin addressing this issue, Regional Board staff, in collaboration with the MS4 Permittees in the Santa Ana River watershed, has organized a Storm Water Quality Standards Task Force (SWQSTF).

The SWQSTF is analyzing, monitoring and documenting actual and potential Beneficial Uses of surface waters within the Santa Ana River watershed. Based on the findings, the SWQSTF plans to recommend changes to the current Beneficial Use designations and Water Quality Objectives specified in the Basin Plan. This Order may be reopened to incorporate any changes to the Water Quality Standards. The SWQSTF is currently focusing on Recreational Beneficial Uses. 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 vs. Browner, 191 F.3d 1159, 1164 (9th Cir. 1999).

III. EXCLUSIONS TO THE PERMIT AREA

Areas of the County not addressed or which are excluded by the storm water regulations and areas not under the jurisdiction of the Permittees were excluded from the area requested for coverage under the ROWD. These include the following areas and activities:

- Federal lands and State properties, including, but not limited to, military bases, national forests, hospitals, colleges and universities, and highways;
- Native American tribal lands;
- Open space and rural (non-urbanized) areas;

- Agricultural lands (return flows from irrigated agriculture and nonpoint source agricultural activities are exempted under the CWA); and

- Utilities, railroads, and special districts (including school districts, park districts, publicly owned treatment works (POTWs) and water utilities, etc.).

These areas in the Permit Area for which coverage under a NPDES MS4 permit is excluded, are shown in Appendix 1. The Regional Board will coordinate with these entities to implement programs that are consistent with the requirements of this Order. 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. The Regional Board may also consider such facilities for coverage under its NPDES permitting scheme pursuant to USEPA Phase II stormwater regulations.

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 the discharges from these facilities into their MS4, this Order requires the Permittees to notify these facilities, in writing, of the state and local post-construction standards and/or other applicable requirements of this Order.

IV. BENEFICIAL USES

Stormwater flows discharged to MS4s in the Permit Area are tributary to various waterbodies (inland surface streams, lakes and reservoirs) of the State. The Beneficial Uses of these waterbodies may include municipal and domestic supply, agricultural supply, industrial service and process supply, groundwater recharge, water contact recreation, non-contact water recreation, and sport fishing, warm freshwater habitat, cold freshwater habitat, preservation of biological habitats of special significance, wildlife habitat and preservation of rare, threatened or endangered species. The ultimate goal of this Order is to protect the Beneficial Uses and quality of the Receiving Waters.

To protect the Beneficial Uses of the Receiving Waters, the Pollutants from all sources, including Urban Runoff, need to be controlled. Recognizing this, and the fact that Urban Runoff contains Pollutants, an area-wide MS4 permit is the most effective way to develop and implement a comprehensive Urban Runoff management program in a timely manner. This area-wide MS4 permit contains requirements with time schedules that will allow the Permittees to continue to address water quality problems caused by Urban Runoff through their management programs to reduce Pollutants in Urban Runoff discharges consistent with the MEP standard [See Appendix 4, Glossary].

V. WATERSHED MANAGEMENT IN THE UPPER SANTA ANA RIVER BASIN

A. Management Approach

To regulate and control Urban Runoff from the Permit Area to the MS4, an area-wide approach is expected to be most effective. The entire MS4 is not controlled by a single entity; the RCFC&WCD, the County, several cities, the State Department of Transportation (Caltrans), and the U.S. Army Corps of Engineers, in addition to other smaller entities, manage portions of the MS4. In addition to the cities, the County and the RCFC&WCD, there are a number of other significant contributors of Urban Runoff to the MS4. These include: large institutions such as the State university system, prisons, schools, hospitals, etc.; federal facilities such as military sites, etc.; State agencies, such as Caltrans; water and wastewater management agencies such as Eastern and Western Municipal Water District; the National Forest Service and State parks. The State Board has issued a separate NPDES MS4 permit to Caltrans. In addition, Caltrans, and the other contributors identified, are not under the jurisdiction of the Permittees. The management and control of the entire MS4 cannot be effectively carried out without the cooperation and efforts of all these entities. Also, it would not be effective to issue a separate MS4 permit to each of the entities within the Permit Area whose land/facilities drain into the MS4 facilities operated by the Permittees and ultimately to Waters of the U.S.. The Regional Board has concluded that the best management option for the Permit Area is to issue an area-wide NPDES MS4 permit to the Permittees.

Although, the Urban Runoff from the Permit Area drains to the Prado Basin, and ultimately into Orange County, Urban Runoff from Orange County areas are regulated under NPDES No. CAS 618030. Some areas within Riverside County are within the Colorado River Basin and San Diego Regional Boards' jurisdictions. Permit requirements for Urban Runoff from the drainage areas of Riverside County within the jurisdiction of the San Diego and Colorado River Basin Regional Boards are addressed by those Regional Boards.

In developing Urban Runoff management and monitoring programs, consultation/coordination with other drainage management entities and other Regional Boards is essential. Common programs, reports, implementation schedules and efforts are desirable and will be utilized to the MEP.

Cooperation and coordination among all the stakeholders are essential for efficient and economical management of the Santa Ana River watershed. It is also critical to manage Non-point Sources at a level consistent with the management of Urban Runoff in a watershed in order to successfully prevent or remedy water quality Impairment. Regional Board staff will facilitate coordination of monitoring and management programs among the various stakeholders.

An integrated watershed management approach for Urban Runoff in the Santa Ana River watershed is consistent with the Strategic Plan (2008-2012[6]) and Initiatives for the State and Regional Boards and the draft California Water Plan Update[7]. A watershed wide approach is also necessary for implementation of the Load Allocations (LAs) and Waste Load Allocations (WLAs) developed under the TMDL process. The Permittees and all the affected entities are encouraged to participate in regional or watershed solutions, instead of project-specific and fragmented solutions.

The Pollutants in Urban Runoff originate from multiple 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 , Site Design , Source Control, and, if necessary, Treatment Control BMPs should be considered.

B. SUB-WATERSHEDS AND MAJOR CHALLENGES

The Santa Ana River watershed is the major watershed within the Santa Ana Region. This watershed is divided into three sub-watersheds: the Lower Santa Ana, Upper Santa Ana, and San Jacinto.

1. The lower Santa Ana River sub-watershed (downstream from Prado Basin) includes the north half of Orange County. The Upper Santa Ana River sub-watershed includes the southwestern corner of San Bernardino County and the northwestern corner of Riverside County. The San Jacinto sub-watershed includes the northwest corner of Riverside County south of the Upper Santa Ana River sub-watershed within the Santa Ana Region.

   Generally, the San Bernardino County drainage areas drain to the Riverside County drainage areas, and Riverside County drainage areas discharge to Orange County through Prado Dam on the Santa Ana River. Most of the flow in the Santa Ana River is recharged into the groundwater in San Bernardino, Riverside, and Orange counties but infrequently some of the flow may be discharged to the Pacific Ocean as a result of heavy storm events.

   Water from rainfall and snow melt runoff, and surfacing ground water from various areas either discharge directly to the Santa Ana River or to watercourses tributary to the Santa Ana River. Other major rivers in the Permit Area include the San Jacinto River and Temescal Creek. The San

[6] State Water Resources Control Board, Strategic Plan Update, 2008-2012, September 2, 2008
[7] http://www.waterplan.water.ca.gov/docs/cwpu2009/1208prd/vol2/UrbanRunoff_PRD_09.pdf

Jacinto Mountain areas drain into the San Jacinto River, which discharges into Canyon Lake and then to Lake Elsinore. The San Jacinto River is ephemeral. Smaller storms tend to be fully captured by Canyon Lake, which the San Jacinto River drains into, with discharges from Canyon Lake to Lake Elsinore only occurring in larger events or wetter years. Any overflow from Lake Elsinore is tributary to Temescal Creek, which flows into the Santa Ana River at the Prado Flood Control Basin. Overflow from Lake Elsinore occurs infrequently, only once every 12 to 15 years.

2. Upper Santa Ana River Sub-watershed:

   a. Reach 3 of the Santa Ana River (Prado Dam to Mission Boulevard in Riverside): Pathogens are the Pollutant of Concern for Reach 3 based on adopted TMDLs and the 2006 303(d) list . With the adoption of the TMDL for Bacterial Indicators, the Basin Plan now contains schedules for achieving compliance with WLAs for Bacterial Indicators in the Middle Santa Ana River (MSAR) subwatershed.

   b. Reach 4 of the Santa Ana River: Reach 4 of the Santa Ana River is the portion of the River from Mission Boulevard Bridge in Riverside to the San Jacinto fault (Bunker Hill Dike) in San Bernardino. Reach 4 is also listed in the CWA Section 303(d) as an Impaired Waterbody. Most of Reach 4 of the River is in San Bernardino County. Pathogens are the Pollutant of Concern for Reach 4and a TMDL is scheduled for completion in 2019.

   c. Other water quality problems along this reach of the River include the buildup of total dissolved solids (TDS, dissolved salts or minerals) and nitrogen, largely in nitrate form. The buildup of TDS and nitrates can impact downstream Beneficial Uses, including groundwater recharge. The buildup of TDS and nitrate is mostly due to agricultural uses, including dairies and the application of fertilizers, municipal and industrial wastewater discharges, and reuse and recycling operations. A complex set of programs and policies are included in the Basin Plan to address this problem, including a water supply plan, a wastewater management plan, and a groundwater management plan. Other elements of the Basin Plan include the Non-point Source program and the storm water program. The Basin Plan identifies the Statewide General Permits and the MS4 permits as the regulatory tools for storm water management in the Basin. In light of the recently adopted Nitrogen-TDS objectives for certain management zones, this Order requires the Permittees to determine baseline concentration of these constituents in dry weather runoff, if any, from significant Outfall locations. The Order also includes Effluent Limitations for TDS and nitrates under dry weather conditions.

d. San Jacinto Sub-watershed: Canyon Lake and Lake Elsinore are in this watershed and are listed on the 2006 303(d) list for pathogens (Canyon Lake) and PCBs and unknown Toxicity (Lake Elsinore). Nutrient TMDLs have been developed for both Canyon Lake and Lake Elsinore. The Basin Plan contains schedules for achieving compliance with WLAs for nutrients in the San Jacinto sub-watershed (Canyon Lake/Lake Elsinore).

C. CWA SECTION 303(d) LIST AND TMDLS:

Pursuant to Section 303(b) of the CWA, the 2006 water quality assessment conducted by the Regional Board listed a number of waterbodies within the Region under Section 303(d) of the CWA as Impaired Waterbodies. These are waterbodies where Water Quality Objectives are being violated and it is presumed that the designated Beneficial Uses are not met. The sources of the Impairments include POTW discharges, and runoff from agricultural, open space and urban land uses. The Impaired Waterbodies in Riverside County within the Santa Ana Regional Board's jurisdiction are listed in Table 2. In addition, CWA Section 303(d) requires states to develop and submit to USEPA for approval a list of waterbodies that are not meeting Water Quality Standards and are not expected to attain these standards even with technology based controls. CWA Section 305(b) requires States to biennially prepare and submit to the USEPA for approval a report assessing statewide surface water quality.

Regional Board staff have reviewed and reevaluated all water quality monitoring and information, combined the CWA Section 305(b) Report with the Section 303(d) List of Impaired Waters and introduced the Proposed 2008 303(d)-305(b) Integrated Report that was adopted by the Regional Board on April 24, 2009. The additional Impaired Waterbodies that are on this list are also identified in Table 2. The Proposed 2008 303(d)-305(b) Integrated Report will not be effective until it has been approved by the State Board or the USEPA.

Federal regulations require that a 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 without Impairing Water Quality Standards in the Receiving Water, i.e., Water Quality Objectives are met and the Beneficial Uses are protected. It is the sum of the individual WLAs for point source inputs, and LAs 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 are being developed for all Pollutants identified in Table 2. The Permittees are required to revise their DAMP, at the direction of the Executive Officer, to incorporate TMDL Program Implementation Plans developed and approved pursuant to the process for the designation and implementation of TMDLs for Impaired Waterbodies.

For 303(d) listed waterbodies identified as potentially Impaired by Urban Runoff and without a TMDL, the Permittees are required to provide special protections such as requiring effective post-construction BMPs, enhanced training programs and developing targeted public outreach that would address the Pollutants of Concern.

This Order incorporates TMDLs that have been adopted for Bacterial Indicator in the MSAR watershed and for nutrients in the Lake Elsinore and Canyon Lake watersheds. On August 26, 2005, the Regional Board adopted Resolution No. R8-2005-001 amending the Basin Plan to incorporate Bacterial Indicator TMDL for MSAR watershed. 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. The stakeholders in these watersheds, including applicable Permittees, are collaborating in the development and implementation of the TMDLs.

This Order includes conditions necessary to implement the TMDLs already approved by the Regional Board as required by federal regulations at 40 CFR 122.44(d)(vii)(B). This Order incorporates the WLAs as Water Quality-Based Effluent Limitations (WQBEL) and requires Permittees to achieve the WLA for Urban Runoff through an iterative process of implementing BMPs. Failure to submit a TMDL Implementation Plan to the Regional Board or failure to implement the approved plan in a timely manner will be deemed to violate the conditions of this Order. The CWA requires the Permittees to have appropriate controls to reduce the discharge of Pollutants to the MEP, 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 the knowledge of Urban Runoff control measures increases. Permittees are required to monitor and report effectiveness of their BMPs with respect to Pollutant reduction goal(s) as one measure of progress toward reducing Pollutant loads from urban sources in accordance with the compliance schedules specified in the TMDL Implementation Plans. If on-going monitoring indicates that implemented BMPs are insufficient to assure compliance with the relevant Water Quality Standard(s), then the Permittees are required to develop and implement more effective BMPs for the controllable urban sources within their jurisdiction to the MEP. In addition, the Permittees are required to submit a revised Comprehensive TMDL Plan documenting the completion schedule for any additional and/or more effective BMPs and must execute the plan upon approval by the Executive Officer. Taken together, these permit conditions are consistent with the facts and assumptions specified in the TMDLs, including the TMDL Implementation Plans, and are expected to achieve compliance with the related WLAs.

Discharge specifications are included for de-minimus types of discharges from Permittee-owned or Permittee-operated facilities and activities and for TDS and total inorganic nitrogen for dry weather discharges.

Table 2

2006 CWA Section 303(d) Listed Waterbodies and April 24, 2009 Proposed 2008 Integrated Report of 305(b) and 303(d) List of Water Quality Limited Segments

WATERBODY	HYDRO UNIT	POLLUTANT/ STRESSOR	SOURCE	SIZE AFFECTED
Canyon Lake	802.120	Pathogens	Nonpoint Source	453 Acres
Lake Elsinore	802.310	Unknown Toxicity	Unknown Nonpoint Source	2431 Acres
		PCB's.	Unknown Nonpoint Source	2431 Acres
		Proposed for 2008 Sediment Toxicity	Unknown Point and/or Nonpoint Sources	2431 Acres
Lake Fulmor	802.210	Pathogens	Unknown Nonpoint Source	4.2 Acres
Santa Ana River, Reach 3	801.200	Pathogens	Unknownn Nonpoint Source	3 miles
		Proposed for 2008 Copper – Wet Season	Unknown Nonpoint Source	3 Miles
Temescal Creek Reach 1		Proposed for 2008 pH	Unknown	Unknown

VI. FIRST, SECOND, AND THIRD TERM PERMITS

1. STORM WATER POLLUTION CONTROL PROGRAMS AND POLICIES

1. Prior to USEPA's promulgation of the final regulations implementing the storm water requirements of the 1987 CWA amendments, the counties of Orange, Riverside and San Bernardino requested an area-wide NPDES permit for storm

water runoff for each of the county areas within the Regional Board's jurisdiction. On July 13, 1990, the Regional Board issued Order No. 90-104 to the Permittees (first term MS4 Permit). In 1996, the Regional Board adopted Order No. 96-30 for the Riverside County Permit Area (second term permit). On October 24, 2002, the Regional Board adopted Order No. R8-2002-0011 for the Riverside County Permit Area (third term MS4 Permit). These MS4 Permits included the following requirements:

a. Prohibited Non-storm Water discharges to the MS4s with certain exceptions.
b. Required the Permittees to develop and implement a DAMP to reduce Pollutants in Urban Runoff to the MEP.
c. Required the discharges from the MS4 to meet in Receiving Waters.
d. Required the Permittees to identify and eliminate IC/IDs to the MS4.
e. Required the Permittees to establish legal authority to enforce Storm Water Ordinances.
f. Required monitoring of dry weather flows, storm flows, and Receiving Water quality, and program assessment.
g. Required the Permittees to inventory, prioritize and inspect construction sites and industrial and commercial facilities based on threat to water quality.
h. Required the Permittees to develop a restaurant inspection program to address practices that may impact Urban Runoff quality such as oil and grease disposal, trash bin area management, parking lot cleaning, spill clean-up, and inspection of grease traps or interceptors to ensure adequate capacity and proper maintenance.
i. Required the Permittees to review and approve Water Quality Management Plans (WQMPs) for categories of New Development and Significant Redevelopment projects to address post-development Urban Runoff water quality and Hydromodification.
j. Required the Permittees to develop a unified response plan to respond to sewage spills that may impact Receiving Water quality.

2. During the first term MS4 Permit, the Permittees developed a DAMP that was approved by the Executive Officer on January 18, 1994. The DAMP included five BMP groups: environmental education activities, solid waste activities, road drainage system operations and maintenance, regulatory and enforcement activities, and structural controls. The DAMP was updated as part of the second and third-term MS4 Permits. The Permittees submitted a revised DAMP with the ROWD for the fourth term MS4 Permit renewal.

3. The RCFC&WCD performs water quality monitoring activities in support of three separate area-wide NPDES MS4 Permits (Santa Ana, San Diego and Colorado River Basin) under the Consolidated Monitoring Program (CMP). The CMP

contains a combined 132 historical, active, and special project sampling locations in the three MS4 Permit regions. Within the Permit Area, water column samples and/or sediment samples have been collected at a total of 93 locations over the last nineteen years. These 93 locations are comprised of 45 MS4 outfalls, 43 Receiving Water, 8 sediment, and 2 special interest sampling locations. In addition, the Permittees participate in a number of sub-regional and regional monitoring programs and special studies.

4. During the third term MS4 Permit, the Executive Officer approved the delay in implementing the bioassessment requirement to allow the development of indices of biological integrity applicable to inland waters. Subsequently, a regional bioassessment monitoring was initiated by the Surface Water Ambient Monitoring Program (SWAMP) to determine the conditions of the receiving waters in a more holistic way. The Southern California Watershed Research Project (SCCWRP), in conjunction with the southern California MS4 Permit programs, has developed a regional bioassessment monitoring program in which the Permittees participating. This Order requires the Permittees to continue to participate in the regional bioassessment monitoring program. It is expected that these regional monitoring stations combined with other Permittee and regional monitoring efforts will be used to identify water quality problem areas and to re-evaluate the monitoring program and the effectiveness of the DAMP. The future direction of some of the DAMP program elements will depend upon the results of the ongoing studies and a holistic approach to watershed management.

5. Other elements of the Urban Runoff management program included identification and elimination of IC/IDs and establishment of adequate legal authority to control Pollutants in Urban Runoff discharges. The Permittees have completed a survey of their MS4 to identify IC/IDs and have adopted appropriate ordinances to establish legal authority. Some of the more specific achievements during the second and third term MS4 Permits are as follows:

   a. During the second term MS4 Permit, the Permittees operated under an Implementation Agreement that sets forth the responsibilities of the Permittees as defined in the 1996 MS4 Permit. The Permittees update this agreement during each MS4 Permit term. The Permittees have adopted Storm Water Ordinances regarding the management of Urban Runoff. The Storm Water Ordinances provide the Permittees with the legal authority to implement the requirements of the MS4 Permit and the key regulatory requirements contained in 40 CFR Section 122.26(d)(2)(I)(A-F).

   b. Revised DAMP: Includes 28 Construction Site and 36 Municipal and Industrial Source Control BMPs that are to be implemented by the Permittees for purposes of controlling Pollutants associated with Urban Runoff to the MEP. The Permittees also strengthened enforcement and compliance elements of the DAMP. Enhanced the Construction Site

inspections, the Industrial and Commercial Facility inspections, New Development review requirements, and the Permittee facilities and activities program.

c. Cooperated in the establishment of TMDL Task Forces and workgroups for Lake Elsinore, Canyon Lake and the MSAR.

d. Assisted in development and implementation of the TMDLs for Canyon Lake, Lake Elsinore and the MSAR.

e. Developed and updated methods to track program effectiveness such as resident surveys, tracking hotline inquiries, and web counters.

f. In August 1999 the RCFC&WCD and the County's Environmental Health Department executed an agreement that provides the framework for an area-wide Commercial and Industrial Compliance Assistance Program (CAP).

g. The Permittees have participated in the CMP.

h. The Permittees administered area-wide programs including: Hazardous Materials emergency response, household hazardous waste collection, industrial/commercial CAP and public education and outreach. Some of these programs were coordinated with Caltrans and local agencies.

i. A Municipal Facilities Strategy was established then later incorporated into the DAMP, the Supplement "A" New Development Guidelines were amended to require compliance with the Riverside County WQMP for specific categories of New Development and Significant Redevelopment projects.

j. The Riverside County WQMP was developed in 2004. The Model WQMP is a post-construction planning tool to address Urban Runoff from New Development and Significant Redevelopment. The WQMP is implemented on a watershed-specific level, and provides guidance for project specific post-construction BMPs to address the quantity and quality of Urban Runoff from New Development and Significant Redevelopment projects. Any New Development or Significant Redevelopment project that requires discretionary approval must submit a project-specific WQMP to the appropriate Permittee. The project-specific WQMP ensures that management of Urban Runoff to protect Receiving Water quality is considered a priority during project design and operation.

k. Established the Management Steering Committee that brings together the city managers in the Permit Area promoting consensus and communication on a regional basis.

l. Formation of sub-committees to guide and develop specific program elements (Construction Activities, Industrial/Commercial Activities, New Development/ Significant Redevelopment, Public Education, Permittee Facilities & Activities, Monitoring, & Finance).

m. Evaluated and revised ordinances, regulations, rules, and codes to ensure appropriate level of legal authority.

n. A Technical Advisory Committee for overall program development and implementation was established.

o. Program Review: A number of existing programs were reviewed to determine their effectiveness in combating Urban Runoff Pollution and to recommend alternatives and or improvements, including Permittee activities and facilities, IC/IDs to the MS4 systems, and existing monitoring programs.

p. Enhanced Public Education program through development of new outreach materials and programs.

q. Public Education: A number of steps were taken to educate the public, businesses, industries, and commercial establishments regarding their role in implementing Urban Runoff Pollution controls. The Industrial Facility dischargers were notified of the Urban Runoff regulatory requirements. For a number of unregulated activities, BMP guidance documents were developed and a toll free hotline was established for reporting any suspected water quality problems.

r. The Permittee's website hosted by RCFC&WCD, including the "Only Rain Down the Storm Drain" public information page, was developed and is continually enhanced. It contains resources for residential facilities, businesses, developers and contractors. The website is accessible from the RCFC&WCD home page. The website offers free brochures that all web site visitors can print in quantities or can order including:

   i. *After the Storm* – a citizen's guide to understanding MS4 Pollution in your neighborhood or when performing daily activities.

   ii. *Automotive Maintenance & Car Care* – guidelines for keeping your auto shop or retail fuel facility in environmental shape.

   iii. *Outdoor Cleaning Activities* – guideline for outdoor cleaning activities and wastewater disposal.

   iv. *Pools, Spas and Fountains* –Environmental maintenance suggestions for pool, spa, and fountain owners.

   v. *What's the Scoop* – tips for a healthy pet and a healthier environment.

   vi. *Household Hazardous Waste (HHW)* – A schedule of collection locations for proper disposal of HHW.

   vii. *Storm Water Pollution Found in Your Neighborhood* – door hanger.

s. In addition to the information provided on the Only Rain Down the Storm Drain website, the Public Education and Outreach Program has:

i. Tested and/or implemented several new Public Education and Outreach Program effectiveness tracking mechanisms including call tracking, web counters, testing, and surveys.

ii. Conducted a review of the efficacy of Permittee employee training programs.

iii. Enhanced the toll free storm water Pollution reporting hot line to include public education information and support for the public and other interested stakeholders.

iv. Enhanced on-line registration access for NPDES training to help facilitate training of appropriate Permittee employees.

v. Worked with the Riverside-Corona Resource Conservation District to develop home garden workshops and presentations to elementary and middle schools and staff to raise public awareness of Urban Runoff management issues and Source Control BMPs and to encourage volunteers, partners, and groups to gather annually for a trash and debris clean-up day along the Santa Ana River.

vi. Developed special newspaper and billing inserts, fliers and advertisements to raise public awareness of Urban Runoff management issues and Source Control BMPs. A radio advertising campaign was also developed and implemented for a limited time.

vii. Developed and presented workshops regarding household hazardous waste use and proper disposal at major home improvement stores throughout Riverside County.

viii. Placed numerous advertisements in the Penny Saver and Bargain Bulletin to raise public awareness of Urban Runoff management.

ix. In cooperation with certain County Service Areas and other programs, pet waste signs with bag dispensers have been installed at various parks to help encourage the proper disposal of animal waste.

x. Coordinated with County-wide Animal Control Facilities, as well as city-owned animal control facilities and Humane Societies, to distribute specific materials to the County Agricultural inspectors as well as Regional Board inspectors for use during facility inspections.

xi. Distributed educational and outreach materials to the County Agricultural inspectors as well as Santa Ana Regional Board staff inspectors for use during facility inspections.

xii. Cooperated with the Western Riverside Council of Government (WRCOG) in the Used Oil Block Cycle Grant that decreases the amount of illegally dumped motor oil by promoting the addition of new Certified Oil Collection Centers.

xiii. Participated in WRCOG's "Cleanest County in the West" program to address issues relating to litter and illegal dumping which targeted both students and adults.

xiv. Supplemental Environmental Projects: As a result of an environmental enforcement case settlement brought by the County Department of Environmental Health, Conoco Phillips and Downs Energy developed two posters and a billboard, respectively. These items were designed to increase the awareness of appropriate BMPs for retail fuel businesses.

t. Permittee Training: Training was provided to Permittee employees to implement New Development Guidelines and Public Works BMPs. The fourth-term MS4 Permit specifies additional training requirements to focus on necessary competencies for storm water program managers, Permittee planners and inspection staff. This was added following information collected during Regional Board staff audits of Permittees' storm water management programs, which found that a number of the Permittees' staff and/or contractors were not adequately trained to properly implement the required program elements contained within the third term MS4 Permit and/or training programs were not properly documented.

u. Related Activities: Modified MS4s by channel stabilization and creation of sediment basins; eliminated or permitted and documented Illicit Connections to the MS4s.

v. Pursued and received Proposition 50 Planning Grant to develop an Integrated Regional Watershed Management Plan for the San Jacinto watershed and to facilitate implementation of the Canyon Lake/Lake Elsinore Nutrient TMDL.

w. Pursued and received two Proposition 40 Integrated Regional Watershed Management Plan implementation grants to facilitate the MSAR TMDL and LE/CL TMDLs.

x. Co-Permittees developed and maintain an inventory database (or databases) of Construction Sites 1-acre or larger for which they have issued a building or grading permit. For each Construction Site/project included in a Co-Permittee's inventory, the Co-Permittees have assigned a priority of "high," "medium," or "low" to reflect the Construction Site's potential for Impairing Receiving Water quality.

y. Created databases for the Commercial and Industrial Facilities within each jurisdiction.

z. Developed a GIS Web Browser to assist developers and Permittees in identifying pertinent water quality information for proposed New Development projects.

aa. Developed Planning Application forms for Permittee use to ensure that the need for a project-specific WQMP was properly identified for New Development and Significant Redevelopment projects early in the planning process.

bb. Developed a FAQ and watershed Impairment maps to assist Permittees and developers with preparing and reviewing project-specific WQMPs.

cc. Enhanced online watershed maps to assist developers and the public with identifying areas tributary to Impaired Waterbodies.

dd. Developed a BMP design handbook to standardize BMP selection and design in Riverside County.

ee. Initiated development of an enhanced BMP Design Handbook to provide additional guidance for LID and post-construction BMP design.

ff. Participation in the Storm Water Monitoring Coalition (SMC) efforts to evaluate LID options and establish guidance for BMP implementation for Southern California areas.

gg. Participation in SCCWRP's Hydromodification studies to develop scientifically based design guidance for Southern California.

hh. Initiated cooperative program with County Environmental Health to promote environmental enhancement projects in lieu of fines for violations of environmental laws. This initiative resulted in the billboard advertising campaign to promote appropriate BMPs for gas stations and garages.

ii. Prepared a one-year evaluation of litter management BMPs. This evaluation assessed the relative efficiency and cost effectiveness of Anthropogenic litter management BMPs including: street sweeping, catch basin cleaning, deployment of trash receptacles, public education, and MS4 maintenance. As a result, a Litter Removal Inspection Form was developed that assisted the Permittees in identifying and prioritizing areas with litter problems. The Permittees augmented the litter management programs including employee/contractor training, Industrial and Commercial Facility inspections, recycling programs including bulk-item collection, participation in watershed clean-up efforts, and illegal dumping retrieval.

jj. The RCFC&WCD coordinated GIS-based maps for Permittee MS4 facilities. The MS4 maps are updated annually with new information provided by the Permittees as part of the Annual Reporting process. The GIS layers are also now available on the RCFC&WCD's website through an internet GIS browser.

kk. Updated Model Facilities Pollution Prevention Plan for Permittee facilities not requiring coverage under the General Permit for Storm Water Discharges Associated with Industrial Activities (General Industrial Permit).

ll. The Permittees completed a MS4 assessment in 2004 to identify opportunities for incorporation of regional BMP retrofits within the limits of existing infrastructure.

mm. Pursued a Proposition 13 Grant, through the Santa Ana Watershed Project Authority, to develop a LID BMP Demonstration and Testing Facility. RCFC&WCD has continued to develop this project and plans to start construction this winter despite the current freeze on new grant projects.

B. PRIOR TERM PERMITS - WATER QUALITY IMPROVEMENTS

An accurate and quantifiable measurement of the impact of the above stated Urban Runoff management programs is difficult, due to 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 Urban Runoff 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 HHW collected and disposed off at appropriate disposal sites, the amount of used oil collected, and the amount of Anthropogenic debris removed from the MS4, etc.

The Permittees' water quality monitoring data submitted to date document a number of exceedances of Basin Plan Water Quality Objectives for various Urban Runoff-related Pollutants; the most notable among these excceedances was fecal coliform bacteria. Where these exceedances have resulted in the development of TMDLs for the MSAR, this Order requires the Permittees named in the TMDL: to comply with the WLAs for Bacterial Indicators consistent with the Implementation Plan requirements defined in the MSAR Bacterial Indicator TMDL.

During the prior MS4 Permit terms, there was an increased focus on watershed management initiatives and coordination among the MS4 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. The Principal Permittee continues to be an active participant in the SWQSTF, the Canyon Lake/Lake Elsinore nutrient TMDL, the MSAR Bacterial Indicator TMDL, and the SMC studies. In addition to the TMDL implementation and monitoring activities, the Permittees participate in the Regional Integrated Freshwater Bioassessment Monitoring Program, the BMP Effectiveness Project assessing the effectiveness of LID techniques. Riverside and San Bernardino MS4 Programs are also coordinating on the development of several outreach programs.

It is anticipated that with continued implementation of the revised DAMP, the programs proposed in the ROWD incorporated into this Order 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.

VII. FUTURE DIRECTION/2007 ROWD

A. Recognizing the significant resources utilized in developing the 2002 MS4 Permit and the significant commitment the Permittees are making to address water quality Impairments, including those identified in the 2006 303(d) List as high priority for establishment of TMDLs, the Permittees proposed in the 2007 ROWD to maintain the fundamental structure and content of the 2002 MS4 Permit and the 2005 DAMP with modifications to reflect:

1. Removed descriptions of studies that have been completed;
2. Updated references to related orders by the Regional Board and State Board;
3. Adoption of TMDL requirements;
4. Evolution of compliance programs;
5. Further standardization and definition of terms;
6. Consolidation of similar compliance requirements [training requirements, reporting requirements, IC/ID requirements] to simplify the Order, increase readability and prevent the need for duplicative language;
7. Deletion of requirements in the 2002 MS4 Permit that described the development of compliance program elements which were incorporated into the 2005 DAMP;
8. Development of LIPs by the Permittees during the fourth term Order;
9. Addition of Permittee coverage under the Small Linear Underground Projects (State Board Order No. 2003-0007-DWQ, NPDES No. CAS000005) and Utility Vaults (State Board Order No. 2006-0008-DWQ, NPDES No. CAG990002) General Permits;
10. Recognition that the Municipal Facilities Strategy and Enforcement Compliance Strategies have been incorporated into the DAMP; and
11. Regional Board staff comments received by the Permittees during the third term permit, including comments received during the January 22, 2007 ROWD kick-off meeting regarding topics such as LID, Hydromodification, LIPs, etc.

B. In addition, the 2007 ROWD proposed continuing with the 2005 DAMP with some revisions. Based on an effectiveness assessment analysis, the following significant changes were incorporated into the Permittees 2007 draft DAMP compliance programs:

1. The Permittees proposed to complete preparation of LIPs within 12 months of Order adoption. The Permittees propose to develop LIPs that will:
   a. Specify how each program element of the DAMP shall be implemented;
   b. Describe the ordinances, plans, policies, procedures, and tools (e.g., checklists, forms, educational materials, etc.) used to execute the DAMP;
   c. Identify the organizational units responsible for implementation of each program element;
   d. Establish internal reporting requirements to ensure and promote accountability; and
   e. Describe an adaptive method of evaluation and assessment of program effectiveness for the purpose of identifying program improvements.

2. The final report "BMP Siting Study for the Santa Ana Permit Area" was released in May 2005. The sites identified in this study are likely to be further evaluated for opportunities to implement Regional BMPs necessary to comply with existing and future TMDLs.

3. Proposed revisions to the 2002 MS4 Permit provisions to reflect the unified IC/ID reporting procedures currently contained within the DAMP for simplicity and clarity.

C. Regional Board Approach to Consolidation of Overlapping NPDES Permit Requirements

1. During the third term MS4 Permit, the Permittees reviewed the applicability of the General Permit-Small Linear Underground Projects (State Board Order No. 2003-0007-DWQ, NPDES No. CAS000005), the General Permit-De Minimus Discharges (Order No. R8-2003-0061 as amended by Order Nos. R8-2005-0041 and R8-2006-0004), and the General Permit-Utility Vaults (Order No. 2006-0008-DWQ, NPDES No. CAG990002) to their activities such as hydrant flushing, maintenance on potable water supply system(s), construction dewatering, and the short-term and intermittent discharges from the de-watering of utility vaults and underground structures. Since the DAMP incorporates BMPs for the activities covered by these general permits, the Permittees recommended separate coverage under the Small Linear Underground Projects, De Minimus Discharges, or Utility Vaults General Permits was not necessary. This Order now includes coverage for De Minimus discharges from Permittee-owned facilities and activities specifically excluded from coverage under the General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality, NPDES NO. CAG998001, Order No. R8-2009-0003. Permittees shall continue to obtain separate coverage for activities covered

by the Small Linear Underground Projects and Utility Vaults General Permits, unless these permits are incorporated into the General Construction Permit.

2. Specific identification of the types of discharges that must have coverage under the General De Minimus Permit and the General Construction Permit, is included in Section 5 of the 2007 DAMP. This Order requires the Permittees to include a description of those de minimus discharges into the Permittees' LIP, including a Regional Board notification process.
3. Prioritized inspections and monitoring based on sampling and monitoring results and other metrics to help target activities that present the highest risk to water quality.

D. During the fourth term Order, the following revisions to the Public Education and Outreach Program will be priorities:

1. Continue coordination of public education outreach with adjacent MS4s.
2. Continue to evaluate and enhance outreach materials for IC/IDs, nutrients, fertilizers, and pesticides.
3. Continue to focus the Public Education and Outreach Program on the Pollutants causing the greatest impacts to water quality, determined by the monitoring results and the list of Impaired Waterbodies [303(d) list].

The Permittees have already taken several steps in this direction. For example, the Permittees have provided spray bottles with environmentally friendly pesticide recipes printed on the side to residents at community fairs; the Permittees have developed or are in the process of developing brochures for septic system management, landscape management, and gardening; the Riverside and San Bernardino County Permittees are coordinating on a Curiosity Quest Episode (KVCR Family Show) to promote BMPs for nutrients, fertilizers and pesticides and the Permittees place information in hardware and gardening stores regarding pesticide and fertilizer management. The Permittees also incorporate other materials to address general Pollutants of Concern.

E. As a result of continued program effectiveness assessment the Permittees propose to update Annual Reporting forms to incorporate specific reporting requirements for all effectiveness assessment metrics.

F. Enhanced online watershed maps to assist developers and the public with identifying areas tributary to Impaired Waterbodies.

G. WQMP

1. The Permittees committed to maintain the "Frequently Asked Questions" information sheet for New Development and Significant Redevelopment projects to assist with the development and implementation of the revised WQMP.

2. The Permittees committed to update the Riverside County Storm Water Quality Best Management Practice Design Handbook to (1) better incorporate LID design concepts, (2) incorporate guidance to describe how developments can offset Hydromodification impacts with LID and (3) incorporate additional design guidance to ensure maintainability and functionality of BMPs, throughout the life of the development. This Order further requires the Permittees to revise the WQMP consistent with the requirements of the Order.
3. The Permittees committed to maintain the WQMP template to assist developers with developing a project-specific WQMP.
4. An audit of each of the Permittees' Urban Runoff management programs during the third term 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, Project Development Guidance, etc.. It appears that many of the existing procedures, Development Standards, Ordinances and Municipal Codes may be barriers to implement LID BMPs. This Order requires the Permittees to facilitate LID techniques specified in this Order.

H. The Regional Board has proposed a revised Notice of Intent and Notice of Termination for Permittee construction projects to assist Regional Board staff with identifying locations and owners of Permittee projects.

I. The Permittees have committed to annual updates to Sanitary Sewer Overflow Procedures to ensure proper contact information for Permittee and outside agencies.

J. WATERSHED APPROACH

1. TMDL for Bacterial Indicator in the MSAR subwatershed and nutrients in the Canyon Lake and Lake Elsinore subwatershed are incorporated into this Order (See Section V.C). The Permittees support TMDL implementation and agreed to participate in a comprehensive water quality monitoring program to ensure that Urban Runoff meets the Water Quality Objectives identified in the Basin Plan and are consistent with the WLAs specified in the TMDLs. This Order requires that, consistent with the requirements of the respective TMDL Implementation Plans, the Permittees use the water quality monitoring of Urban Runoff to evaluate the effectiveness of the BMP programs.

2. The USEPA has recommended a shift to watershed-based NPDES permitting[8] and watershed approach[9] to CWA programs, including NPDES programs. The Permittees and the Regional Board also recognize that a watershed-based approach is expected to be effective in controlling Pollutants in Urban Runoff. Consistent with this approach, this Order requires the Permittees to develop and implement programs that integrate Hydromodification and water quality management strategies with land use planning policies, ordinances, and plans within each jurisdiction. A *watershed approach* considers the diverse Pollutant sources and stressors and watershed goals within a defined geographic area (i.e., watershed boundaries). A watershed approach has three basic components:

   a. *Geographic Focus*: Watersheds are nature's boundaries. They are the land areas that drain to surface waterbodies, and they generally include lakes, rivers, estuaries, wetlands, streams, and the surrounding landscape. Groundwater recharge areas are also considered.

   b. *Sound Management Techniques Based on Strong Science and Data*: Sound scientific data, tools, and techniques are critical to evaluate the process. Actions taken include characterizing priority watershed water quality problems and solutions, developing and implementing action plans, and evaluating their effectiveness within the watershed.

   c. *Partnerships/Stakeholder Involvement*: Watersheds transcend political, social, and economic boundaries. Therefore, it is important to involve all the affected interests in designing and implementing goals for the watershed. Watershed teams may include representatives from all levels of government, public interest groups, industry, academic institutions, private landowners, concerned citizens, and others.

There are two major sub-watersheds in Riverside County within the Permit Area – the MSAR subwatershed, consisting of the portions of the Permit Area that drain to Reaches 3 and 4 of the Santa Ana River, and the San Jacinto River sub-watershed, which consists of the portions of the Permit Area that drain to Lake Elsinore. The Permittees participate in the MSAR TMDL Task Force and the Lake Elsinore and Canyon Lake TMDL Task Forces, which are stakeholder driven, watershed-based efforts to address Pollutants of Concern in the respective sub-watersheds. The Permittees have also implemented several stakeholder driven, watershed-based conservation programs such as the Special Area Management

[8] USEPA: Watershed-based NPDES permitting is a process that emphasizes addressing all stressors within a hydrologically-defined drainage basin, rather than addressing individual Pollutant sources on a discharge-by-discharge basis.
[9] USEPA (1996a): "The watershed approach is a coordinating framework for environmental management that focuses public and private sector efforts to address the highest priority problems within hydrologically defined geographic areas, taking into consideration both ground and surface water flow."

Plan, the Western Riverside County Multiple Species Conservation Plan, the San Jacinto River Integrated Watershed Management Plan and the Santa Ana Watershed Project Authority One Water One Watershed Plan.

These efforts are also addressed and discussed in the DAMP, which integrates these efforts into a coherent and uniform compliance program to protect Receiving Waters. Due to economies of scale and the fact that many of the Permittees have jurisdiction in both sub-watersheds, the Permittees have opted to continue to implement uniform MS4 Permit compliance programs across the entire Permit Area (for example Permittee training programs educate inspectors about the impacts and sources of pathogens and nutrients as opposed to offering separate sub-watershed specific training programs for the San Jacinto and MSAR sub-watersheds). The Permittees have indicated that as source assessments and monitoring data results from the aforementioned watershed efforts produce findings regarding potential urban sources of Pollutants of Concern that they may opt, in the future, to develop specific action plans for the MSAR and San Jacinto River sub-watersheds, or potentially even tributaries there-of. If so, the DAMP will be appropriately modified to clarify the sub-watershed specific components.

The Permittees also currently implement interim Hydromodification criteria and have committed to revising their Hydromodification management programs based on studies currently being conducted by the SCCWRP. This Order requires the Permittees to continue to pursue these watershed planning efforts and enhance them as appropriate to address Pollutants of Concern.

J. To promote program transparency, each Permittee proposed to develop its own LIP that:

   a. Specifies how each program element of the DAMP shall be implemented;
   b. Describes the ordinances, plans, policies, procedures, and tools (e.g., checklists, forms, educational materials, etc.) used to execute the DAMP;
   c. Identifies the organizational units responsible for implementation of each program element;
   d. Establishes internal reporting requirements to ensure and promote accountability; and
   e. Describes an adaptive method of evaluation and assessment of program effectiveness for the purpose of identifying program improvements.

K. The audits conducted by Regional Board staff have also shown a significant deficiency in measuring program effectiveness. This Order requires quantifiable measures for evaluating program effectiveness.

L. The above-mentioned strategies for the fourth-term Order build upon and continue the programs and policies developed by the Permittees during the prior MS4 Permit terms as described in Sections VI and VII above.

M. A combination of these programs and policies and the requirements specified in this Order should ensure control of Pollutants in Urban Runoff from the MS4 owned and/or controlled by the Permittees.

VIII. ORDER REQUIREMENTS AND PROVISIONS

The legislative history of storm water statutes (1987 CWA Amendments), USEPA regulations (40CFR Parts 122, 123, and 124), and clarifications issued by the State 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 Runoff. Due to the economic and technical infeasibility of full-scale end-of-pipe treatments and the complexity of Urban 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 protection of the Beneficial Uses of the Receiving Waters consistent with the MEP standard. State Board (Orders No. WQ 98-01 and WQ 99-05) concluded that MS4s must meet the technology-based MEP standard and Water Quality Standards. 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.

The ROWD included a discussion of the current status of Riverside County's Urban Runoff management program and the proposed programs and policies for the next five years (fourth-term Order). This Order incorporates these documents and specifies performance commitments for specific elements of the Permittees Urban Runoff management program.

This Order recognizes the significant progress made by the Permittees during the first three MS4 Permit terms in implementing the storm water regulations. This Order also recognizes regional and innovative solutions to such a complex problem, addresses deficiencies in the Permittees' Urban Runoff programs observed during the audits conducted by Regional Board staff, and considers comments by the USEPA on other draft MS4 Permits. This Order specifies quantifiable performance measures to determine compliance and assess the effectiveness of the Urban Runoff programs. This Order incorporates an integrated watershed approach in solving water quality and Hydromodification impacts resulting from urbanization and aims to promote LID techniques as a key element to mitigate impacts from New Development and Significant Redevelopment projects. The proposed Order also requires the Permittees

to implement TMDL WLA through iterative BMP programs as required in the respective approved TMDL Implementation Plans (See Section V.C). The goal of these programs and policies that are included in this Order is to achieve and maintain Water Quality Standards in the Receiving Waters.

The essential components of the Urban Runoff management program, as established by federal regulations [40 CFR 122.26(d)] are: (i) Adequate Legal Authority, (ii) Fiscal Resources, (iii) Storm Water Quality Management Program (SQMP) - (Public Information and Participation Program, Industrial/Commercial Facilities Program, Development Planning Program, Development Construction Program, Public Agency Activities Program, IC/IDs Elimination Program), and (iv) Monitoring and Reporting Program. The major sections of the requirements in this Order include: I. Facility Information, II. Findings, III. Permittee Responsibilities, IV. Local Implementation Plan, V. Discharge Prohibitions, VI. Effluent Limitations, Discharge Specifications and Other TMDL Related Requirements, VII. Receiving Water Limitations, VIII. Legal Authority/Enforcement, IX. Illicit Connections/Illegal Discharges; Litter, Debris and Trash Control, X. Sewage Spills, Infiltration into MS4 Systems from Leaking Sanitary Sewer Lines, Septic System Failures, and Portable Toilet Discharges, XI. Co-Permittee Inspection Programs, XII. New Development (including Significant Redevelopment), XIII. Public Education and Outreach, XIV. Permittee Facilities and Activities, XV. Training Program For Storm Water Managers, Planners, Inspectors And Municipal Contractors, XVI. Notification Requirements, XVII. Program Management/DAMP Review, XVIII. Fiscal Resources, XIX. Monitoring and Reporting Program, XX. Provisions, XXI Permit Modification, and XXII. Permit Expiration and Renewal.

These programs and policies are intended to improve Urban Runoff quality and protect the Beneficial Uses of Receiving Waters of the Permit Area.

A. RESPONSIBILITIES

The responsibilities of the Principal Permittee are to coordinate the overall Urban Runoff management program and the Co-Permittees are responsible for managing the Urban Runoff program within their jurisdictions as detailed in the ROWD and the proposed Order, Order No. R8-2010-0033.

The existing Implementation Agreement needs to be revised to include the cities that were not signatories to this Agreement. The Order requires that a copy of the signature page and any revisions to the Agreement be included in the specified Annual Report.

B. 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 is a significant source of Pollutants, a separate NPDES permit or coverage under the Regional Board's De Minimus Permit will be required.

C. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS, INCLUDING WASTE LOAD ALLOCATIONS FOR DISCHARGES TO 303(d) LISTED WATERBODIES WITH ADOPTED TMDLS

The Order clarifies allowed discharges and those discharges (only from Permittee owned or operated facilities and activities) allowed only if certain discharge specifications are met, such as those covered under the De Minimus Permit. These discharges should be consistent with the Regional Board's General De Minimus Permit for Discharges to Surface Waters, Order No. R8-2009-0003, NPDES No. CAG 998001. Permittees' de minimus discharges covered under this Order include: 1) dewatering wastes from subterranean seepage, except for discharges from utility vaults; 2) discharges resulting from hydrostatic testing of vessels, pipelines, tanks, etc.; 3) discharges resulting from the maintenance of potable water supply pipelines, tanks, reservoirs, etc.; 4) discharges resulting from the disinfection of potable water supply pipelines, tanks, reservoirs, etc.; 5) discharges from potable water supply systems resulting from initial system startup, routine startup, sampling of influent flow, system failures, pressure releases, etc.; 6) discharges from fire hydrant testing or flushing; 7) air conditioning condensate; 8) swimming pool discharges; 9) discharges resulting from diverted stream flows; and 10) construction dewatering wastes. The DAMP and the LIP are required to be revised to incorporate information regarding Permittees' de minimus discharges.

This Order requires Permittees to implement established TMDL WLAs specified for Urban Runoff through an iterative BMP approach (see Section V.C above).

D. RECEIVING WATER LIMITATIONS

Receiving Water Limitations are included to ensure that discharges of Urban Runoff from MS4s 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 USEPA and State Board guidance and recognizes the complexity of Urban Runoff management.

This Order requires the Permittees to meet Water Quality Standards in Receiving Waters in accordance with USEPA requirements, as specified in State Board Order No. WQ 99-05. If Water Quality Standards are not met through implementation of certain 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 process.

E. LEGAL AUTHORITY/ENFORCEMENT

Each Permittee has adopted 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 the responsible parties. In the event of egregious or repeated violations, the option exists for a referral to the County District Attorney for possible prosecution or to the Regional Board for enforcement under the California Water Code or the CWA. In order to eliminate unauthorized, Non-storm Water discharges, reduce the amount of Pollutants commingling with Urban Runoff and thereby protect water quality, an additional level of enforcement is required between Notices of Violation and District Attorney referrals.

The third term MS4 Permit required the Permittees to establish the authority and resources to administer either civil or criminal fines and/or penalties for violations of their Storm Water Ordinances. The Permittees now have this authority for penalties. Within the fourth term Order, Permittees are required to exercise this authority by developing an enforcement program to be administered within the industrial, commercial and construction elements of their Urban Runoff management programs. The enforcement program has been required to be included as an update to each Permittee's LIP. The effectiveness of this program must be documented in the Annual Reports submitted by the Permittees. However, it is acknowledged that once cases have been referred to the District Attorney or Environmental Crimes Task Force, etc. for prosecution, case details are confidential.

The fourth term Order further requires the Permittees to document and implement progressive and decisive enforcement actions, evaluate the effectiveness of their enforcement program and sanctions by tracking compliance and evaluating the amount of time to return to compliance.

This Order requires the Permittees to include in the LIP their legal authority and mechanisms to implement the various program elements required by this Order to properly manage, reduce, and mitigate potential Pollutant sources within each Permittee's jurisdiction. The LIP shall include citations of appropriate local ordinances, identification of departmental jurisdictions and key personnel in the implementation and enforcement of those ordinances. The LIP shall include

procedures, tools and timeframes for progressive enforcement actions and procedures for tracking compliance.

F. ILLICIT CONNECTIONS/ILLEGAL DISCHARGES; LITTER, DEBRIS AND TRASH CONTROL

Federal regulation, 40 CFR 122.26(d)(2(iv)(B), requires the Permittees to eliminate illicit discharges to the MS4s. The Permittees have completed a survey of the MS4 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 MS4.

The Permittees currently have several programs to address IC/IDs:

1. The Permittees operate a toll free phone line, provide e-mail access for filing complaints and take direct calls regarding IC/ID reports from third parties. These reports are investigated by Permittee staff and reported in IC/ID investigation forms. All Permittee public education outreach materials promote the use of these reporting mechanisms.
2. Permittee staff receive training on identification and reporting of IC/IDs to appropriate Permittee staff. These reports are investigated and reported in IC/ID reporting forms.
3. The Permittees conduct Industrial and Commercial Facility and Construction Site inspections to identify potential IC/IDs. The outcomes of these inspections are reported in inspection reporting databases.
4. The Permittees contribute funds to the County Hazardous Materials Response Team to train and educate them to handle Illegal Discharges or accidental hazardous waste discharges so as to prevent IC/IDs. A summary of HAZMAT activities is provided in the Annual Reports.
5. The RCFC&WCD monitors Office of Emergency Service reports for potential IC/ID incidents and investigates them as appropriate. Results are reported in the RCFC&WCD complaint call database and reported to the Permittees as appropriate.
6. The RCFC&WCD has developed an online GIS tool that identifies the location of District and Permittee MS4 facilities to facilitate IC/ID investigations and response.
7. The Permittees have developed a Sanitary Sewer Overflow Procedure to limit the potential for sewage spills to the MS4.
8. RCFC&WCD, as Principal Permittee, has dedicated staff that conducts dry weather monitoring and also evaluates RCFC&WCD MS4 facilities for maintenance problems and/or IC/IDs. Detected IC/IDs from monitoring data or field inspections are reported to the District's NPDES section, logged into

RCFC&WCDs complaint database, and reported to the appropriate Permittee for follow up action.

However, with a few exceptions, program evaluations conducted during the third term MS4 Permit showed that this program element is primarily complaint driven or an incidental component of municipal inspections or MS4 inspections for a number of Permittees. This Order requires the Permittees to ensure their LIPs describe each Permittee's plan for focused, systematic IC/ID investigations, outfall reconnaissance surveys, indicator monitoring, and track their sources[10]. A proactive Illicit Discharge Detection and Elimination (IDDE) program should be integrated with other LIP program elements as appropriate including: mapping of the Permittees' MS4 to track sources, aerial photography, Permittee inspection programs for construction, industrial, commercial, MS4, Permittee facilities, etc., watershed monitoring, public education and outreach, Pollution Prevention, and rapid assessment of stream corridors to identify dry weather flows and illegal dumping.

G. SEWAGE SPILLS, INFILTRATION INTO MS4 SYSTEMS FROM LEAKING SANITARY SEWER LINES, SEPTIC SYSTEM FAILURES, AND PORTABLE TOILET DISCHARGES

Federal regulation, 40 CFR 122.26(d)(2)(iv)(B)(4), requires the Permittees to develop procedures to prevent, contain, and respond to spills that may discharge into the MS4s. The Permittees have already developed a program to address various types of spills to the MS4s. This Order requires the Permittees to continue to implement the unified sewer response plans in collaboration with the local sanitary sewer system operators. To facilitate swift response actions, the Permittees are required to provide 24-hour access to MS4s to the sanitary sewer system operators. The Permittees should also work cooperatively with the sanitary sewer system operators to determine if exfiltration from leaking sanitary sewer lines is causing or contributing to Urban Runoff Pollution problems. In addition, the Permittees are required to control infiltration or seepage from sanitary sewers to the MS4s through routine preventive maintenance of the MS4 (40 CFR 122.26(d)(2)(iv)(B)(7)). This Order also requires the Permittees to implement control measures and procedures to prevent, respond to, contain and clean up all sewage and other spills from sources such as portable toilets and septic systems.

On May 2, 2006, the State Board issued the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (SSO Order) to address proper management and operation of sewer collection systems and to control sanitary sewer overflows. It requires dischargers/enrollees to develop and implement a written Sewer System Management Plan (SSMP) approved by the discharger's governing board and

[10] 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.

report sewer spills through an on-line reporting system. This Order requires the Permittees have reviewed the unified sewage spill response plan developed during the third term MS4 Permit with the local sewering agencies and determined that it is consistent with the requirements of the SSO Order. This Order also requires each Permittee to include in its LIP the interagency or interdepartmental sewer spill response coordination and responsibilities.

The MS4 program audits indicated that a majority of the Permittees with septic systems have inadequate information with regard to the number and location of those systems within their jurisdiction. This Order requires the Permittees with septic systems to develop within 2 years of adoption of this Order, an inventory of septic systems within its jurisdiction and establish a program to ensure that failure rates are minimized.

H. CO-PERMITTEE INSPECTION PROGRAM;

Federal regulations, 40 CFR 122.26(d)(2)(iv)(A-D), require the Permittees to inventory, prioritize and inspect Industrial and Commercial Facilities and Construction Sites. This Order requires the Co-Permittees to continue inspections of Industrial and Commercial Facilities and Construction Sites within their jurisdiction in order to control the Pollutants entering the MS4. The Co-Permittees will continue to maintain the inventory of Industrial and Commercial Facilities and Construction Sites in the above categories, prioritize these facilities based on threat to water quality, 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.

An evaluation of Permittee inspection programs during the third term MS4 permit indicated certain deficiencies in the Industrial and Commercial Facility and Construction Site inspection programs of some of the Permittees. In many instances, program documentation of progressive enforcement and facilities' return to compliance were not properly documented. This Order requires Permittees to document inspections and enforcement and evaluate the effectiveness of their inspection and enforcement program by tracking the time for facilities or sites to return to compliance. The Permittees who do not have an internet accessible database are required to initiate quarterly reporting and update of the inventory, inspection and enforcement database for facilities within their jurisdiction.

In order to address discharges to the MS4 from residential sources, the fourth term MS4 Permit requires the Permittees to develop and implement a residential program to prevent residential discharges from causing or contributing to a violation of Water Quality Standards in the Receiving Waters (40 CFR 122.26(d)(2)(iv)(A)).

I. NEW DEVELOPMENT (INCLUDING SIGNIFICANT REDEVELOPMENT)

Federal regulation, 40 CFR 122.26(d)(2)(iv)(A)(2), requires the Permittees to develop a comprehensive master plan to address discharges from New Development and Significant Redevelopment projects. During the third term MS4 Permit, the Permittees revised their New Development guidelines to address water quality and Hydromodification impacts resulting from urbanization. A WQMP for Urban Runoff was approved by the Regional Board in 2004 and became effective in 2005. This Order requires the Permittees to continue to work towards the goal of restoring and preserving the natural hydrologic cycles in proposed urban developments by reviewing and approving project-specific WQMPs to address post-construction impacts. The WQMP should be designed to address water quality impacts, including Hydrologic Conditions of Concern (HCOC), from New Development and Significant Redevelopment projects through: (1) Site Design BMPs, including LID techniques; (2) Source Control BMPs; and (3) Treatment Control BMPs. This Order recognizes the importance of LID techniques to minimize the impact of urbanization on water quality. This Order requires the project proponents to infiltrate, harvest and reuse, evapotranspirate, or bio-treat the volume of runoff from a 24-hour, 85th percentile storm event where feasible. The Order also provides alternatives and in-lieu programs for project sites where infiltration, harvesting and re-use, evapotranspiration and bio-treatment are not feasible.

Program evaluations conducted during the third term MS4 Permit indicated a need for establishing a clear nexus between the watershed protection principles (including LID) and the planning and approval processes of the Permittees. This Order requires the Permittees to review and revise their Development Standards, Zoning Codes, Conditions of Approval, Development Project Guidance, ordinances, and other related documents to identify and eliminate barriers to incorporate watershed protection principles.

The SMC, including project lead agency, the San Bernardino County Flood Control District, in collaboration with SMC member, SCCWRP and the California Storm Water Quality Association (CASQA), is developing a LID Manual for Southern California with funding from the State Board, CASQA and other sources. This manual will be incorporated into the CASQA BMP Handbooks. The Permittees are encouraged to utilize the manual as a resource for proper LID design and implementation techniques.

Program evaluations have also suggested a need for improvement in the Permittees' inspection, and tracking of post-construction BMPs. This Order requires the Permittees to revise their close-out procedures to include field

verification that Site Design, Source Control and Treatment Control BMPs are operational and consistent with the approved WQMP.

This Order incorporates new project categories and revised thresholds for several categories of New Development and Significant Redevelopment projects that trigger the requirement for a WQMP. New project categories include streets, roads and highways of 5,000 square feet or more of paved surface and retail gasoline outlets (RGOs) with 5,000 square feet or more with 100 or more average daily vehicle traffic. The threshold criteria that trigger the WQMP requirement for non-residential commercial/industrial construction projects have been reduced from 100,000 square feet to 10,000 square feet or more of impervious surface. The threshold for residential subdivision projects has also been revised from 10 units or more to a threshold of 10,000 square feet or more of impervious surface.

This Order incorporates new project categories and revised thresholds for several categories of New Development and Significant Redevelopment projects that trigger the requirement for a WQMP. The 2008 National Research Council (NRC) report[11] 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. 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. 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 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 stormwater conveyance function. Despite these limitations, the Regional

[11] National Research Council Report (2008), http://www.nap.edu/catalog.php?record_id=12465

Board finds that Permittee construction of streets, roads and highway capital 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 equivalent documents that include site specific consideration utilizing BMP guidance to address street, roads and highway capital project runoff to the MEP.

As public works, streets, roads and highway projects are the only facilities typically captured by the new WQMP category, and these projects typically have unique constraints that make them difficult to address through the WQMP process, a separate set of requirements has been established for addressing this category of development. Roads that are typically constructed as part of a development are typically incorporated into the broader WQMP for the development activity, providing more options for mitigation via the WQMP process.

Consistent with a long term holistic approach to address water quality and Hydromodification impacts resulting from urbanization, this Order requires Permittees to continue to develop tools that facilitate integration, to the extent practicable, of water quality, stream protection, storm water management and re-use strategies with land use planning policies, ordinances, and plans within each jurisdiction. These tools should address cumulative impacts of development on vulnerable streams, preserve or restore, consistent with the MEP standard, the structure and function of streams, and protect surface and groundwater quality. For 303(d) listed waterbodies with Urban Runoff Pollutant sources and without a TMDL, the Permittees are required to provide special protections such as requiring more effective post-construction BMPs focus training programs and develop targeted public outreach that would address the urban source of the Pollutant of Concern. The Permittees are also required to participate in the TMDL development and implementation.

J. PUBLIC EDUCATION AND OUTREACH;

Federal regulation, 40 CFR 122.26(d)(iv), requires the Permittees to develop a comprehensive storm water management plan with public participation and 40 CFR 122.26(d)(iv)(B)(6) requires the Permittees to engage in outreach activities to facilitate the proper management of Pollutants. 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 programs 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, have established a storm water Pollution Prevention hotline, started an advertising and educational campaign, and distributed 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.

The Permittees have already developed BMP fact sheets to address sources from residential activities such as auto washing and maintenance activities; use and disposal of pesticides, herbicides, fertilizers and household cleaners; and collection and disposal of pet wastes.

This Order requires the Permittees to annually review their public education and outreach efforts and revise their activities, if necessary, to address public outreach needs fed back from other Urban Runoff program elements. Federal regulation, 40 CFR 122.26(d)(v), requires the Permittees to conduct a program assessment to determine the reduction in Pollutant loadings due to Urban Runoff management programs. Each Permittee is required to implement an assessment program, guided by the CASQA Guidance manual or equivalent alternative, to measure the change in behavior of its target communities to reduce discharge of Pollutants to the MS4 and the environment.

K. PERMITTEE FACILITIES AND ACTIVITIES;

Federal regulation, 40 CFR 122.26(d)(iv)(A), requires the Permittees to ensure that their activities and facilities do not cause or contribute to violations of Water Quality Standards in receiving waters. Education of Permittee planning, inspection, and maintenance staff is critical to ensure that Permittee facilities and activities do not cause or contribute to an exceedance of Receiving Water Quality Standards. The 2002 MS4 Permit also specified minimum requirements for street sweeping and inspection and maintenance of drainage facilities. The Permittees were also required to develop and distribute BMP fact sheets for various Permittee activities. Permittee as well as contract staff that perform Permittee activities were required to be properly trained. The second and third term MS4 Permits required the Permittees to prepare a Municipal Facilities Strategy (MFS) to ensure that Permittee facilities and activities do not contribute Pollutants to Receiving Waters. The MFS was incorporated into Section 5 of the DAMP during the third term MS4 Permit. Each year, by August 1st, the Permittees are required to review their activities and facilities to determine the need for revisions to Section 5 of the DAMP.

This Order continues and builds upon the requirement of the third term MS4 Permit by requiring Permittees to include structural post-construction BMP information for certain Permittee projects along with the Notice of Termination submitted to the Executive Officer upon completion of the construction activity. The Notice of Termination must include photographs of the completed project, a location map, and for public works projects subject to a WQMP, structural post-

construction BMP location, field verification report and identify long term operation and maintenance responsibility. Permittees are required to develop a database of post-construction BMPs for which the Permittees are responsible and shall reference this database in the LIP.

Program evaluations conducted during the third term MS4 Permit indicated varying degrees of compliance at Permittee facilities and activities. This Order requires each Permittee to inventory its fixed facilities, field operations and MS4 facilities to ensure that Permittee facilities do not cause or contribute to a Pollution or Nuisance in Receiving Waters. These facilities and field operations are to be prioritized for inspection according to threat to water quality.

Fixed Permittee facilities and field operations include, but are not limited to fire training facilities, corporate yards, maintenance and storage yards, animal shelters, water treatment facilities, swimming pools, warehouses, and hazardous materials storage facilities, and recreation facilities. The Permittees are required to include in their LIP procedures and schedules for inspections and maintenance of Permittee facilities and activities. Urban Runoff from other Permittee facilities, such as airports, wastewater treatment plants and landfills, is regulated under the General Industrial Permit.

L. PERMITTEE CONSTRUCTION PROJECTS

The third term MS4 Permit authorized the discharge of storm water from Construction Sites on one acre or more that are under ownership or direct responsibility of the Permittees. The Permittees were required to notify the Executive Officer prior to commencement of construction activities, and to comply with the substantive requirements of the latest Statewide General Construction Activities Storm Water Permit.

Program evaluations conducted during the third term MS4 Permit indicated that some of the Permittees were not submitting or were not aware of the requirement to submit a Notice of Intent and a Notice of Completion for Permittee construction projects.

M. TRAINING PROGRAM FOR STORM WATER MANAGERS, PLANNERS, INSPECTORS AND MUNICIPAL CONTRACTORS

Education of Permittee planning, inspection, and maintenance staff is important to ensure that land use decisions, local permit approvals and Permittee facilities and activities do not cause or contribute to an exceedance of Receiving Water Quality Standards. During the term of the 2002 MS4 Permit, the Permittees attended training classes specific to major Urban Runoff program elements including New Development/Significant Redevelopment, Construction Site and Industrial Facility inspections, and Permittee activities.

This Order requires the Permittees, in conjunction with a broader array of MS4 Programs or CASQA, to define the program implementation training needs for Urban Runoff program staff, including contractors, managers and inspectors. The training curriculum must be designed for Permittee facilities and field operations staff, Permittee inspection staff, Urban Runoff program managers and those involved in the review and approval of WQMPs and CEQA documents, including Permittee contractors. The audits of the Permittees indicated the need for better inter-departmental collaboration and communication in the local Urban Runoff program implementation. This Order requires LIPs to develop and document processes and procedures for coordination between planners, plan reviewers, engineers and inspectors to ensure that appropriate post-construction BMPs are approved, installed, and are operational.

N. NOTIFICATION REQUIREMENTS

Most of the notification requirements that were spread throughout the third term MS4 Permit were consolidated into one section.

O. PROGRAM MANAGEMENT ASSESSMENT/DAMP REVIEW

The DAMP is a management document that needs to be updated with the new requirements of this Order.

P. FISCAL RESOURCES

Each Permittee is expected to exercise its full authority to secure the resources necessary to meet all requirements of this Order. See Section IX for existing funding mechanisms and potential limitations to Permittee funding.

Q. MONITORING AND REPORTING REQUIREMENTS

During the first term MS4 Permit and part of the second term MS4 Permit, the Permittees conducted monitoring of the Urban Runoff flows, Receiving Water quality, and sediment quality. The Santa Ana Phase I NPDES Monitoring Program began in November 1991 with 27 monitoring sites. The program has been reduced in phases to more specifically address Urban Runoff program needs and to redirect monitoring resources to TMDL-related activities. There was a time where samples were collected on a rotational basis with no consistent monitoring from year to year. On April 14, 2003, with the submittal of an Interim Monitoring Program, monitoring at seven core sampling locations (Sampling Stations 040, 316, 318, 364, 702, 707, and 752) was established that provided representative and consistent monitoring results for the Permit Area.

The Riverside County monitoring programs, as well as other monitoring programs nationwide, have shown that there is a high degree of uncertainty in

the quality of Urban 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 are a number of Pollutants in Urban Runoff. A link between Pollutants in Urban Runoff and Beneficial Use Impairments has been established in a few studies.

This Order requires the Permittees identified as TMDL stakeholders in an approved TMDL to continue to comply with applicable TMDL Implementation Plan requirements, including monitoring requirements, and to implement Urban TMDL WLAs through an iterative BMP approach (see Section V.C above).

Wet and Dry Seasons are defined differently by the various monitoring programs included in this Order. The Middle Santa Ana TMDL defines the Wet Season as November 1 through March 31st and the Canyon Lake/Lake Elsinore TMDL monitoring defines it as October 1st through May 31st. The Monitoring and Reporting Program for this Order generally defines the Wet Season as October 1st through May 31st. Monitoring required under this Order is expected to be conducted consistent with the applicable seasonal definitions.

The MSAR Bacterial Indicator TMDL and Canyon Lake/Lake Elsinore Nutrient TMDL requires the Permittees to comply with TMDL Implementation Plan requirements to revise the DAMP to incorporate BMPs in the Permittees Urban Runoff programs. This Order requires the Permittees to evaluate the effectiveness of the BMPs implemented as part of the DAMP in conformance with the TMDL Implementation Plan requirements.

This MS4 monitoring program includes sampling Urban Runoff at a variety of sites located throughout the Permit Area for three storm events per year. Urban Runoff samples will be collected and analyzed for a variety of constituents. In addition to these efforts, the Permittees are reevaluating their overall Urban Runoff monitoring program to determine its effectiveness in meeting the following objectives:

1. Assess rates of mass loading
2. Assess influence of land use on water quality
3. Assess compliance with Water Quality Objectives
4. Assess effectiveness of water quality controls
5. Detect IC/IDs
6. Identify problem areas and/or trends
7. Identify Pollutants of Concern
8. Identify baseline conditions
9. Establish/maintain a water quality database

To accomplish these goals, the following activities are conducted:

1. Collect water quality data
2. Collect rainfall/runoff data
3. Establish quality assurance/control procedures
4. Conduct data analysis and archiving
5. Install and maintain appropriate equipment
6. Prepare an Annual Report

RCFC&WCD, in its role as Principal Permittee, participates in the SMC and other task forces. The goal of the SMC is to develop the technical information necessary to better understand storm water mechanisms and impacts, and then develop the tools that will effectively and efficiently improve storm water decision-making. Some of the cooperative monitoring efforts conducted through the SMC and other task forces include Comparative Evaluation of Microbial Source Tracking Techniques, Model Monitoring Program Guidance, Peak Flow Study, and Laboratory Inter-Calibration Studies. Under the auspices of the SMC, SCCWRP prepared "Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California", August 2004 Technical Report No. 419. This report noted, "...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 Cities of Long Beach, and Los Angeles, the Los Angeles, Santa Ana and San Diego Regional Boards, the State Board, SCCWRP, Caltrans, and the USEPA. This Order requires the Permittees to continue mass emissions monitoring to determine Pollutant loading.

During the second and third term MS4 Permits, there was an increased focus on watershed management initiatives and coordination among the MS4 permittees in Orange, Riverside and San Bernardino Counties. The MS4 permittees participated in a number of regional monitoring programs and other coordinated program and policy developments, such as the Regional Integrated Freshwater Bioassessment Monitoring Program, and the BMP Effectiveness Assessment. The Principal Permittee continues to be an active participant in the SWQSTF, MSAR Bacterial Indicator TMDL, Canyon Lake/Lake Elsinore (San Jacinto) Nutrient TMDL and the SMC. This Order recommends that the Permittees continue their participation in these types of watershed coordination efforts and provides them with opportunities to use these efforts to comply with applicable requirements of the Permit.

The third term MS4 Permit required the Permittees to initiate bioassessment monitoring. To allow for a holistic approach, this Order requires the Permittees to participate in the Regional Integrated Freshwater Bioassessment Monitoring

Program in lieu of a separate bioassessment monitoring program for the Permit Area.

This Order requires the Permittees to re-evaluate their CMP and submit a revised plan for approval. The revised CMP should integrate the goals and objectives of the Watershed Action Plan and rectify data gaps from previous monitoring efforts.

R. PROVISIONS – Standard Language per NPDES regulations.

S. PERMIT MODIFICATION– Standard Language per NPDES regulations.

T. PERMIT EXPIRATION AND RENEWAL– Standard Language per NPDES regulations.

IX. WATER QUALITY BENEFITS, COST ANALYSIS, AND FISCAL ANALYSIS

There are direct and indirect benefits from clean lakes and 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 2008, more than 2/3 of the U.S. waters met these criteria. In the 1999 "*Money"* magazine survey of the "Best Places to Live", clean water and air ranked as two of the most important factors in choosing a place to live. Thus environmental quality has a definite link to property values.

The true magnitude of the Urban Runoff problem is still elusive and any cost estimate for cleaning up Urban Runoff would be premature short of end-of-pipe treatments. For Urban 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 BMPs to the MEP to combat the problem.

The costs incurred by the Permittees in implementing these programs and policies can be divided into three broad categories:

A. 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 SWQSTF, Regional Board/State Board meetings and other public forums; preparation and submittal of compliance reports and other reports required under the NPDES permits, responding to Water Code Section 13267 requests, budget and other program documentation; coordination of consultant studies, Co-Permittee meetings, and training seminars.

B. Individual Costs for DAMP Implementation: These are costs incurred by each Permittee for implementing the BMPs (drainage facility inspections for Illicit Connections, drain inlet/catch basin stenciling, public education, etc.) included in the DAMP. A number of programs and policies for Non-Point and Urban Runoff Pollution controls existed prior to the MS4 permit program. However, the DAMP that was developed and implemented in response to the MS4 Permits required additional programs and policies for Urban Runoff Pollution control.

C. Individual Costs of Pre-Existing Programs: These are costs incurred by each Permittee for water Pollution control measures which were already in existence prior to the MS4 permit program. These programs included recycling, litter control, street sweeping, drainage facility maintenance, and emergency spill response.

Historically, the Permittees have employed four distinct funding methods to finance their NPDES Activities. Many Permittees utilize a combination of these funding sources. The different methods include:

A. Santa Ana Watershed Benefit Assessment Area

In 1991, the RCFC&WCD established the Santa Ana Watershed Benefit Assessment Area (SAWBAA) to fund its NPDES activities. Currently, SAWBAA revenues fund both area-wide NPDES program activities and the RCFC&WCD's individual MS4 permit compliance activities.

B. County Service Area 152

In December 1991, the County of Riverside formed County Service Area 152 (CSA 152) to provide funding for compliance activities associated with its NPDES permit activities. Under the laws that govern CSAs, sub-areas may be established within the overall CSA area with different assessment rates set within each sub-area. The cities of Corona, Moreno Valley, Norco, Riverside, Lake Elsinore and San Jacinto elected to participate in CSA 152.

C. Utility Charge

The City of Hemet funds a portion of its NPDES program activities through a utility charge.

D. General Fund /Other Revenues

Permittees also utilize general fund revenue to finance their NPDES activities. Several Permittees also report using general fund and other revenue sources (e.g., gas taxes, developer fees, etc.) to fund a portion of their Urban Runoff management activities.

The Annual Report provides the most recent budgets and expenditure projections available for the costs incurred by the Permittees in implementing these programs and policies. The following information, in parenthesis, on the current economic conditions was provided by the Permittees.

{Current Economic Conditions
The following information was provided by the Permittees and does not constitute a finding by the Regional Board:

Historically, the Permittees have employed several funding methods to finance their MS4 Permit compliance activities. Unfortunately, the mortgage crisis, collapse of the housing market and the economic recession has resulted in the cessation of virtually all development activity and has significantly reduced sales tax revenue in the Santa Ana Region. Property tax revenues have been reduced by the high level of foreclosure activity and reduced property values. Property tax revenues have been further reduced by homeowner requests for reassessments to reflect the reduced property values. The impact of these economic conditions on the Permittees in the Santa Ana Region has been particularly severe. As a result, funds typically provided by these funding methods has been severely reduced, and it is anticipated that this condition will continue for an indefinite period. The funding methods historically used and the effects of the economic situation on the availability of funds through these sources are summarized as follows:

- Santa Ana Watershed Benefit Assessment Area. In 1991, the District established the Santa Ana Watershed Benefit Assessment Area to fund its MS4 Permit compliance activities. Currently, the Benefit Assessment revenues fund the District's share of the area-wide MS4 Permit program activities and the District's individual compliance activities as a Permittee. Under the Benefit Assessment each parcel is taxed based on the impervious area of each parcel at a set rate established through Proposition 218. This rate has not been increased since 1991 and increases in revenues have resulted from increases in the number of contributing parcels resulting from New Development. In 2007/08 the Santa Ana Watershed Benefit Assessment generated approximately $2,030,000 in revenue. These revenues are used to fund the District's compliance activities and the bulk of the administrative costs associated with the District's duties as Principal Permittee.

  Outlook: The District expects at best to maintain, if not see temporary reductions in Benefit Assessment revenues due to the significant number of homes that are not paying property tax due to foreclosure. An increase in the established Benefit Assessment rate to compensate for these reductions would require approval of 2/3 of the voters or 50% of the property owners and is unlikely, especially in the current economic climate. An increase in the number of contributing parcels will not occur until the development industry recovers.

- General Fund/Other Revenues. The County and the Cities utilize general fund revenue to finance most of their MS4 Permit compliance activities. General fund revenue is generated by property tax, sales tax, and auto license taxes.

  Outlook: The Permittees expect a continued reduction in the funds available through General Fund/Other Revenues through at least FY 2010/2011. Historically, the Permittees have investigated other funding sources, including a phone survey conducted by LESJWA with support from the District and the County of Riverside to evaluate the possibility of passing a new assessment to fund water quality improvements benefiting Lake Elsinore. The results of the survey found insufficient voter support for water quality-related issues to move forward with a special election. The Permittees have also formed a finance committee which has met several times to obtain information about actions that they can take to maximize revenues and potential alternative funding sources. These efforts met with some success, particularly in relation to maximizing fees for service; however significant new funding sources were not identified or available to the Permittees even during the more favorable economic conditions experienced during the term of the 2002 Riverside County MS4 Permit.

- Fees. Several Permittees charge fees for services such as inspections, plan check and other recoverable costs related to compliance with the 2002 Riverside County MS4 Permit. These fees cover both the direct and indirect costs associated with conducting these inspections/reviews including associated compliance tracking and reporting.

  Outlook: It is notable that, with the virtual collapse of the development industry in the Santa Ana Region, the fees received by the Permittees for review of New Developments and Construction Site inspections have been significantly reduced. With this reduced level of fee-based income, maintenance of the existing inspection and plan review programs will place a burden on overall funding of the compliance programs. The Permittees do not expect revenues from fees to recover until the development industry recovers. Even with recovery of the development industry, it is anticipated that revenues from fees will be reduced for the majority of the Cities within the Santa Ana Region and the County due to the reduced area remaining for development in their jurisdictions.

- Grants. The Permittees have actively pursued and, as available, used grants to fund compliance programs.

  Outlook: In December the State's budget crisis resulted in a directive to State agencies from the Department of Finance to halt projects that rely on bond funds, including those funded by Proposition 40, Proposition 50 or Proposition 84. The State of California is the primary source of grant funding for water

quality projects. Future availability of funds to resume compliance projects funded by grants is uncertain.

It is clear that the current economic climate and that of the foreseeable future is creating a significant burden upon the Permittees that will make the continuance of all existing MS4 Permit compliance programs difficult. If new funding sources or alternative combinations of funding sources cannot be identified, it is likely that compliance program funding will be further impacted.

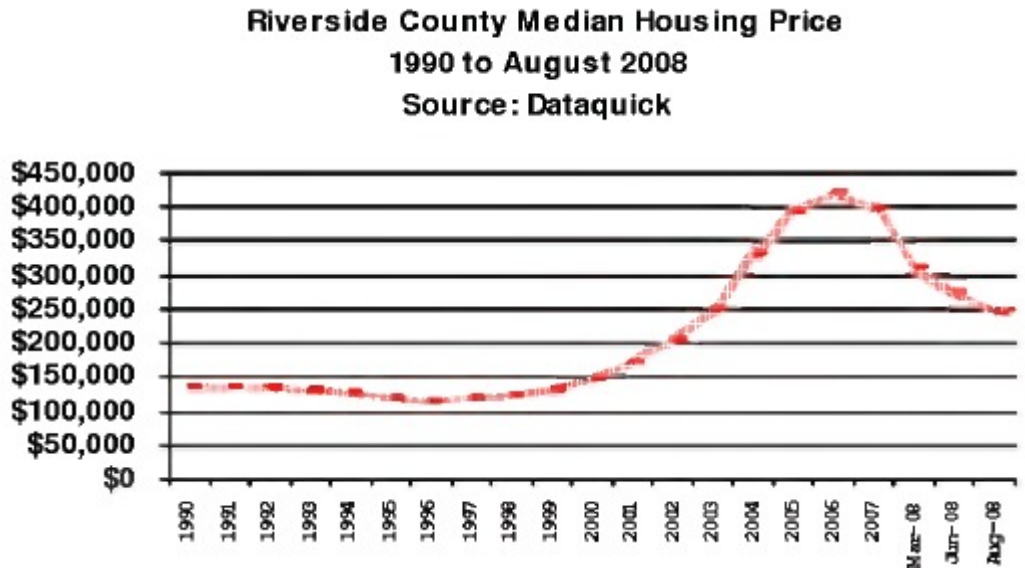
Economic Projections

According to Chicago Title, Southwest Riverside County has experienced a very significant increase in supply of single-family residential units on the market. As a result, housing price indicators are very negative. In the majority of the Southwest Riverside submarket, the pending price is less than closing price that suggests the weakness of the market. The October 2008 count of bank owned (REO) properties for Riverside County as a whole was 12,078. The number of foreclosures was 23,480. The presence of high levels of REO properties will continue to negatively affect the price line. In addition, the level of foreclosures is increasing. At the end of January 2009, 68% of the homes listed for sale are foreclosures or short sales[12].

With regard to other sectors of the economy, Riverside County has taken a serious turn for the worse in 2008, with projections indicating that the severe downturn will continue through 2009 at the very least. The economic difficulties being faced in the Southwest Riverside submarket is the result of the dramatic downturn in the housing market in this area, the national financial turmoil, the worldwide credit crisis, and the increasing consumer debt crisis. According to Beacon Economics, a respected economics consulting firm in Los Angeles, Inland Southern California is clearly at the epicenter of this economic turmoil, with extremely high rates of unemployment at present. Unemployment rates in Inland Southern California are expected to reach 12.4% (Riverside County beat that – unemployment was 14.6% in November 2009 – California Employment Development Department) before this deep recession is over. Housing prices are expected to continue their precipitous decline from their peak levels in the two Inland Southern California counties through at least 2011. According to Dataquick, median home prices in Riverside County peaked at $415,000 in January 2007. At the end of this cycle, the median home price in Riverside County is expected to be $198,000. Figure 1 depicts the median housing price in Riverside County over the period 1990 to August 2008.

[12] Orange County Register, January 27, 2009, p. 11.

Figure 1. Riverside County Median Housing Price (1990 – August 2008)

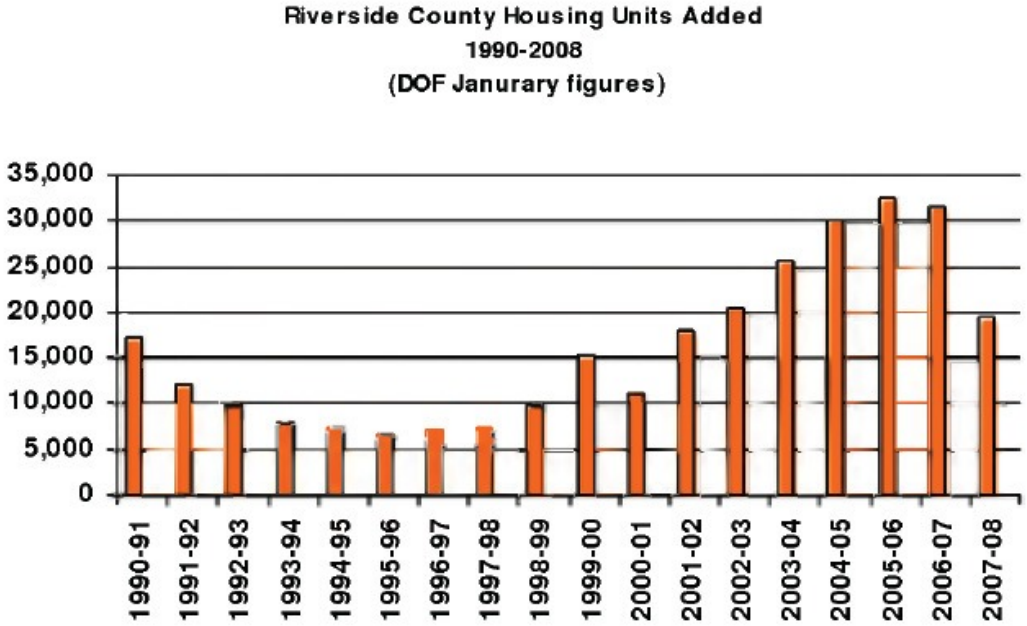


Source: Riverside County Center for Demographic Research. 2008. Riverside County Progress Report, pg 14.

Local Government sales tax revenues remained fairly stagnant through 2006 and began to decline in early 2007, according to Beacon. By the second quarter of 2008, the taxable sales in Riverside County declined by 7.7%. This will continue with taxable sales possibly bottoming out by 2010. These shocks are expected to continue and accelerate within the southwest Riverside County economy.

As a direct outcome of the current economy and the economic outlook into the term of the 2009 Riverside County MS4 Permit, the number of New Development proposals has plummeted and any significant rebound is not forecast. New and redevelopment projects will likely remain minimal. As shown in Figure 2, the number of housing units being added each year has dropped below the levels seen at any point in time during the 2002 Riverside County MS4 Permit. These numbers will likely continue to decrease for a significant portion of the new 2010 Riverside County MS4 Permit term.

Figure 2. Riverside County Housing Units Added (1990 – 2008)



Source: Riverside County Center for Demographic Research. 2008. Riverside County Progress Report, pg 12.

These economic issues and projections directly affect and limit both:

- The need for including enhanced New Development and Significant Redevelopment requirements in the 2010 Riverside County MS4 Permit, and

- The Permittees ability to fund, and even seek new funding sources for additional MS4 Permit requirements for New Development and Significant Redevelopment projects.

Permittee specific projections are as follows:

County of Riverside

The County is operating with a structural deficit of $12 million and plans a 25% budget reduction from FY 2008/2009 through FY 2011/2012. The County's current budget of $4.7 billion represents a 5% reduction from the previous year and next year's budget is expected to be cut by 10%. These cuts are directly associated with the decline in property values caused by the high number of foreclosures. There are concerns about having to use discretionary funds to meet State mental health and social service mandates. In addition, the County is dependent on funds from Federal and State sources. If during this time of economic crisis Federal and State funding sources are reduced or eliminated, any unfunded programs will be terminated. Only core County programs will continue.

The primary source of general fund revenue is from property taxes and sales tax. With the unprecedented number of foreclosures, reduced property values, and declining sales, general fund revenue is in a downward spiral. Another source of funding is through the Solid Waste Tipping Fees paid at the County landfills. Volume is down 15% since 2006 with anticipated downward trend to 40% reduction in solid waste through 2014. Programs that are partially funded through tipping fee allotments will be impacted. Due to the declining economy the recycling market has collapsed. Virtually no recyclable materials are being shipped for reprocessing. This loss of revenue and increased disposal costs is further impacting the general fund.

Cuts of 25% for all Net County Cost general fund programs will translate into reduction of County services and elimination of unfunded State and Federal programs. Only core value programs will be provided (including public safety and fee programs).

The County has instituted a hiring freeze and required each department to create a report outlining the projected effects of the budget cuts. The County currently employs over 20,000 people, and layoffs are expected to result from the findings of these departmental reports. It is anticipated that this will impact program delivery for stormwater related activities. No County department will be able to sustain current staffing levels as they try to meet the 25% budget reduction strategy.[13] [14]

City of Menifee

The newly incorporated City of Menifee FY 2008/2009 initial budget was estimated from their comprehensive fiscal analysis that was submitted to the Local Agency Formation Commission during the incorporation process. Because of the economic uncertainty, and the fact that the City is only now beginning to staff positions, it is unknown what the immediate impact of the fiscal crisis will be. The County is responsible for assisting the City in meeting its MS4 Permit compliance requirements during the first year of incorporation which expires October 1, 2009. Currently, the level of property tax revenue that will be available to the City is uncertain. Funding for MS4 Permit compliance requirements was not explicitly budgeted. A financial hardship currently exists because of the costs associated with incorporation.

City of Murrieta

The City of Murrieta's FY 2008/2009 budget did not increase compared to FY 2007/2008. The City has identified a $3.3 million budget shortfall for the current fiscal year ending on June 30, 2009. This represents approximately 8.2% of the City's projected revenue which must be absorbed in five months.

[13] "The Realities of Recession in California: A Statewide Report by U.S. Senator Barbara Boxer, December, 2008, p. 18.
[14] Riverside County Executive Office, January, 2008.

The shortfalls are primarily due to reduced sales tax and property tax revenues. Department heads are currently working on revised budgets to adjust for the loss in revenue.

Additional, budget cuts are anticipated for FY 2009/2010 because the immediate economic outlook is not good. There have been approximately 2,000 home foreclosures within the City. Sales tax revenue is estimated to drop 12.5%, property tax revenue will drop, and the State took approximately $525,000 out of redevelopment funds. Murrieta did not receive any vehicle licensing fees from the State and it appears likely that the State will take more revenue from the cities to solve its budget problems. New NPDES requirements that increase compliance costs will create a financial hardship for the City.

City of Riverside

The City of Riverside has seen declining general fund revenue over the last two fiscal years in virtually all categories. The City's most recent projection indicates that total general fund revenues for the current fiscal year will be under $200 million, down from a budget of $215 million as adopted, and $226.5 million in the prior fiscal year. This represents a decline over two fiscal years of approximately 12%. Specifically, property tax and sales tax revenue continue their decline, which is primarily attributable to decreased residential construction activity and in the case of sales tax declining automobile sales.

The decline in revenue has resulted in a corresponding reduction to general fund expenditures. Specifically, approximately 12% of the positions authorized for the general fund have been vacated and unfunded, either through transferring staff to other funds, attrition or limited layoffs of temporary and contract staff. Additionally, the level of service provided to the community in virtually all City departments has been reduced through funding reductions to items such as street maintenance, recreation programs and libraries, though great care has been taken to minimize the impact of cuts to the public. It is anticipated that in the near term the economic situation will not improve, and staff is preparing a budget for the upcoming fiscal year that anticipates further decreases in revenue.

City of Wildomar

The newly incorporated City of Wildomar FY 2008/2009 initial budget was estimated from their comprehensive fiscal analysis that was submitted to the Local Agency Formation Commission during the incorporation process. Because of the economic uncertainty, and the fact that the City is only now beginning to staff positions, it is unknown what the immediate impact of the fiscal crisis will be. The County is responsible for assisting the City in meeting its MS4 Permit compliance requirements the first year of incorporation that expires July 1, 2009. Currently, the level of property tax revenue that will be

available to the City is uncertain. Funding for MS4 Permit compliance requirements was not explicitly budgeted. A financial hardship currently exists because of the costs associated with incorporation.}

X. 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 Urban Runoff 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 Urban Runoff discharges and Receiving Waters will be improved, thereby improving protection for the Beneficial Uses of Waters of the U.S.. 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.

XI. 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.

XII. PUBLIC WORKSHOP AND PUBLIC HEARING

Regional Board conducted a public workshop regarding the proposed Order on August 3, 2009 at the City of Loma Linda, Council Chambers, 25541 Barton Road, Loma Linda, CA. Based on the comments received, a second draft was released for public review and comments on October 22, 2009. The third draft, issued on December 15, 2009, will be considered for adoption at a public hearing as follows:

Date and time: January 29, 2010; meeting starts at 9:00 a.m.
Location: City of Loma Linda, Council Chambers
25541 Barton Road
Loma Linda, CA

A Notice of Public Hearing and Hearing Procedure is posted on the Regional Board's website indicated below. An agenda for the public hearing to consider adoption of the proposed Order will be posted on the Regional Board's website approximately 10 days prior to the meeting date at:

http://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/riverside_permit.shtml

This information may be also obtained by calling the Regional Board office at 951-782-4130.

The Regional Board recognizes the significance of Riverside County's Storm Water/Clean Water Protection Program and will conduct, participate, and/or assist with any workshop during the term of this Order to promote and discuss the requirements of this Order and the progress of the Urban Runoff management program. The details of the public workshops will be posted on the Regional Board's website indicated above. Persons wishing to be included in the mailing list for any of the items related to this permit may register their name, mailing address and phone number with the Regional Board office at the address given below.

XIII. PUBLIC HEARING

The Regional Board will hold a public hearing regarding the proposed waste discharge requirements. A Notice of Public Hearing was published in the Legal Notices section of the Press Enterprise, a local newspaper, on November 13, 2009. The public hearing on this item is scheduled as indicated above in Section XI. Additional information regarding the public hearing will also be posted on the website indicated above. Further information regarding the conduct and nature of the public hearing concerning these waste discharge requirements may be obtained by writing or visiting the Santa Ana Regional Board office, 3737 Main Street, Suite 500, Riverside, CA 92501. This and other information are also available at the website at: www.waterboards.ca.gov/santaana.

XIV. INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Keith Elliott at (951) 782-4925. 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, and furlough days).

XV. REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group for applications may leave his name, address and phone number as part of the file for an application. Copies of tentative waste discharge requirements will be available on the web for all interested parties to download.

E-mail registration:
http://www.waterboards.ca.gov/resources/email_subscriptions/reg8_subscribe.shtml

XVI. RECOMMENDATION

Staff recommendation is to adopt the tentative Order, Order No. R8-2010-0033, as presented.

APPENDIX 7

NOTICE OF INTENT

FOR DE-MINIMUS DISCHARGES

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION
NOTICE OF INTENT
TO COMPLY WITH THE TERMS AND CONDITIONS OF THE

☐ **Riverside County MS4 Permit**
ORDER NO. R8-2010-0033
NPDES NO. CAS 618033

☐ **San Bernardino County MS4 Permit**
ORDER NO.R8-2010-0036
NPDES NO. CAS618036

GENERAL WASTE DISCHARGE REQUIREMENTS FOR DISCHARGE TO SURFACE WATERS THAT POSE INSIGNIFICANT (DE MINIMUS) THREAT TO WATER QUALITY

I. PERMITTEE (*Person/Agency Responsible for the Discharge*)
Agency/Company
Name:_____
Address/*Street* _____
City _____State _____ZIP_____ Contact Person: _____
Phone: (_____) _____; Email: _____

II. FACILITY
Name:_____
Address/Street _____
City _____State _____ZIP_____ Contact Person:_____
Phone: (_____) _____; Email: _____

a. Projected Flow Rate (gpd):_____,
b. Receiving Water (identify):_____

III. INDICATE EXISTING PERMIT NUMBER: (*if applicable*)
a. Individual Permit Order No. _____ NPDES No. _____
b. General Permit Order No. R8-2010-003-_____
c. Others (specify) _____

IV. CERTIFICATION:

I certify under penalty of law that I am an authorized representative of the permittee and that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the permittee will comply with the terms and conditions stipulated in Orders No. R8-2009-0003 and (R8-2010-0033 or R8-2010-0036, as applicable) including the monitoring and reporting program issued by the Executive Officer of the Regional Board.

Name: _____Title:_____
(type or print)

Signature: _____ Date: _____

Email: _____

Remarks: If changes to facility ownership and/or treatment processes were made after the issuance of the existing permit, please provide a description of such changes on another sheet and submit it with this Notice of Intent.

V. OTHER REQUIRED INFORMATION - FOR NEW DISCHARGERS AND FOR NEW DISCHARGES AND LOCATIONS NOT PREVIOUSLY REPORTED BY EXISTING DISCHARGERS.

Please provide a COMPLETE characterization of your discharge. A complete characterization includes, but is not limited to:

a. A list of constituents and the discharge concentration of each constituent;

b. The estimated average and maximum daily flow rates at unit of gallons per day(gpd); the frequency and duration of the discharge and the date(s) when discharge will start;

c. The proposed discharge location(s) as latitude and longitude for each discharge point;

d. A description of the proposed treatment system (if appropriate);

e. The affected receiving water; the receiving water(s) shall be
   1) receiving storm drain/creek, and/or
   2) the ultimate receiving water, such as Santa Ana River, San Jacinto River, Lake Elsinore, Prado Park Lake, etc.;

f. A map showing the path from the point of initial discharge to the ultimate receiving water. Please try to limit your maps to size of 8.5” X 11”.

g. A list of known or suspected leaking underground tanks and other facilities or operations that have, or may have impacted the quality of the underlying groundwater within 200 feet of the site property lines for projects with expected discharge flow rates of less than 100,000 gallons per day and within 500 feet of the site property lines for projects with expected discharge flow rates of greater than 100,000 gallons per day.

h. Any other information deemed necessary by the Executive Officer.

VI. OTHER

Attach additional sheets to explain any responses which need clarification. List attachments with titles and dates below:

You will be notified by a representative of the RWQCB within 30 days of receipt of your application. The notice will state if your application is complete or if there is additional information you must submit to complete your application, pursuant to Division 7, Section 13260 of the California Water Code.

June 2, 2017

Todd Parton
City Manager
City of Beaumont
550 East 6th Street
Beaumont, CA 92223

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Parton,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Bonnie Johnson
City Manager
City of Calimesa
908 Park Avenue
Calimesa, CA 92320

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Ms. Johnson,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Aaron Palmer
City Manager
City of Canyon Lake
31516 Railroad Cyn Rd
Canyon Lake, CA 92587

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Palmer,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Darrell Talbert
City Manager
City of Corona
400 South Vicentia Avenue
Corona, CA 92882

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Talbert,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

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1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Michele Nissen
City Manager
City of Eastvale
12363 Limonite Avenue, #910
Eastvale, CA 91752

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Ms. Nissen,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Alexander P. Meyerhoff
City Manager
City of Hemet
3777 Industrial Avenue
Hemet, CA 92545

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Meyerhoff,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Gary Thompson
City Manager
City of Jurupa Valley
8930 Limonite Avenue
Jurupa Valley, CA 92509

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Thompson,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Grant Yates
City Manager
City of Lake Elsinore
130 South Main
Lake Elsinore, CA 92530

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Yates,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Ronald Bradley
City Manager
City of Menifee
29714 Haun Road
Menifee, CA 92586

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Bradley,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

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Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

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2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Michelle Dawson
City Manager
City of Moreno Valley
P.O. Box 88005
Moreno Valley, CA 92553-8005

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Ms. Dawson,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

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a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Andy Okoro
City Manager
City of Norco
2870 Clark Avenue
Norco, CA 91760

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Okoro,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Richard Belmudez
City Manager
City of Perris
101 North "D" Street
Perris, CA 92570

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Belmudez,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Jay Orr
CEO
Riverside County Executive Office
4080 Lemon Street, Suite 400
Riverside, CA 92501

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Orr,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

John Russo
City Manager
City of Riverside
3900 Main Street
Riverside, CA 92522

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Russo,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

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Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

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The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Rob Johnson
City Manager
City of San Jacinto
595 South San Jacinto Avenue
San Jacinto, CA 92583

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Johnson,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from Riverside County's Phase I MS4s are regulated through the Riverside County MS4 Permit (Order No. R8-2010-0033 NPDES No. CAS618033, as amended by Order No. R8-2013-0024) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the Riverside County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the Riverside County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the Riverside County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems,

[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. 90-136

NPDES No. CA 8000200

Waste Discharge Requirements
for
San Bernardino County Transportation/Flood Control Department
and
the County of San Bernardino, and
the Incorporated Cities of San Bernardino County Within the Santa Ana Region
Areawide Urban Stormwater Runoff
San Bernardino County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. On August 29, 1990, the County of San Bernardino and the San Bernardino County Flood Control District (SBCFCD) in cooperation with the cities of Big Bear Lake, Chino, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa (hereinafter collectively referred to as the dischargers), submitted NPDES Application No. CA 8000200 for an areawide stormwater discharge permit under the National Pollutant Discharge Elimination System (NPDES).

2. The 1972 Clean Water Act (CWA) recognized the need to prohibit the discharge of pollutants to surface water bodies from point sources such as industrial facilities and municipal sewage treatment plants. The discharges of pollutants from point sources are regulated by the NPDES permit system, which required technology-based controls for treatment of wastewater. Stormwater point source discharges were exempt from the NPDES permitting requirements unless these discharges were contaminated by industrial/commercial activity. The Regional Board recognized the water quality problems associated with stormwater discharges from industrial facilities and has issued a number of stormwater permits for such facilities in accordance with the EPA regulations.

3. In 1976, the United States Environmental Protection Agency (EPA) issued new regulations establishing a comprehensive permitting program for all stormwater discharges except for rural runoff uncontaminated by industrial/commercial activity. Channelized stormwater runoff from rural areas continued to be defined as nonpoint source unless designated otherwise by the permitting authority.

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4. Since 1976, EPA has issued several revisions to the stormwater regulations. Section 405 of the Water Quality Act (WQA) of 1987 added Section 402(p) to the CWA. Pursuant to Section 402(p)(4) of the CWA, EPA is required to promulgate regulations for stormwater permit applications for stormwater discharges associated with industrial activities and municipal separate storm drain systems serving a population of 100,000 or more. Section 402 (p)(4) of the CWA also requires dischargers of stormwater associated with industrial activities and municipal separate storm drain systems serving a population of 250,000 or more to file stormwater permit applications by February 4, 1990.

5. On December 7, 1988, EPA published its proposed regulations in the Federal Register to solicit public comments. Final regulations are tentatively scheduled to be promulgated on October 31, 1990 and to be published in the Federal Register in mid November, 1990. In the absence of final stormwater regulations, a permit governing municipal stormwater discharges should meet both the statutory requirements of Section 402 (p)(3)(B) and all requirements applicable to a NPDES permit issued under the issuing authority's discretionary authority in accordance with Section 402 (a)(1)(B) of the CWA.

6. The beneficial uses of a number of water bodies within San Bernardino County are impaired or threatened wholly or in part due to urban stormwater runoff and nuisance water. These water bodies include Reaches 4 and 5 of the Santa Ana River, Cucamonga Creek (Valley Reach), Chino Creek, Reach 1 of Mill Creek, Plunge Creek, Baldwin Lake, and Big Bear Lake. A comprehensive stormwater and urban runoff management and regulatory program is essential for the protection of the water resources of the Region. The SBCFCD, the County of San Bernardino, the cities in San Bernardino County, and the Regional Board have recognized this fact, and as a first step towards protecting water quality in the area, a comprehensive management program is being developed. This order outlines the existing programs and specifies additional requirements to achieve water quality objectives for the San Bernardino County drainage areas. The intent of this permit is to regulate pollutant discharges and improve water quality in the Region in a timely manner.

7. Within the Santa Ana Region, the SBCFCD, serves a population of approximately 1.11 million, occupying an area of approximately 985 square miles. The County has estimated 258 miles of above-ground and 241 miles of below-ground storm drain channels in the project area. Approximately seven percent (7%) of the San Bernardino County area drains into water bodies within this Regional Board's jurisdiction. The project area is shown on Attachment "A" and the drainage areas are characterized as shown on Attachment "B". Approximately 50% of the San Bernardino County drainage areas is within the jurisdiction of the Lahonton Regional Board and the remaining 43% of the San Bernardino County drainage areas is within the jurisdiction of the Colorado River Basin Regional Board. Urbanization of the drainage areas within the Lahonton and Colorado River Basin Regional Boards is minimal in comparison to that in the drainage areas under the Santa Ana Regional Board's jurisdiction. Therefore, early stormwater permits for stormwater runoff from the drainage areas of San Bernardino County within the jurisdiction of the Lahonton and Colorado River Basin Regional Boards are not expected at this time.

8. The discharges consist of surface runoff generated from various land uses in all the hydrologic drainage areas which discharge into water bodies in San Bernardino County. 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 connections to the storm drain systems. The constituents of concern and significance in these discharges are: total and fecal coliform, enterococcus, total suspended solids, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), oil and grease, heavy metals, nutrients, base/neutral and acid extractibles, pesticides, herbicides, and petroleum hydrocarbon components.

9. There are several entities whose land/facilities drain into the San Bernardino County storm drain systems. These facilities include the cities of San Bernardino County and the State Department of Transportation (Caltrans). The SBCFCD has agreed to be the major responsible party in implementing the provisions of this order. The County of San Bernardino, and the incorporated cities within the county have agreed to cooperate with the SBCFCD in controlling and improving

9. (cont'd)

the quality of urban runoff from their respective areas. The SBCFCD has been named as the "principal permittee" and the County of San Bernardino and the incorporated cities have been named as the "co-permittees". Attachment "C" lists the incorporated cities with their 1990 estimated populations. Of the fourteen cities listed, there are three cities with an estimated 1990 population over 100,000.

10. Due to the enormous variability in stormwater quality and the complexity of the urban runoff management program, this areawide stormwater permit is categorized as a major NPDES permit. This areawide stormwater permit requires all entities discharging stormwater/urban runoff into the storm drain systems or any surface water bodies to have appropriate controls for proper management of this runoff. The Regional Board has the discretion and authority to require non-cooperating entities to participate in this areawide permit or obtain individual stormwater discharge permits, pursuant to 40 CFR 122.26(a). The entities listed in Attachment "D" are considered as potential dischargers of stormwater to the San Bernardino County drainage areas. It is expected that these entities will also work cooperatively with the County of San Bernardino to manage urban runoff.

11. The SBCFCD, as the "principal permittee", will obtain the cooperation of all entities in implementing the provisions of this order. The dischargers are in the process of drafting an implementation agreement which outlines their responsibilities in implementing the stormwater management and monitoring programs in the project area. In general, the SBCFCD, as the "principal permittee", will be responsible for preparing operating budgets, preparing and monitoring the implementation programs, coordinating and submitting reports to the Regional Board, and conducting inspections on District's storm drain systems. The County of San Bernardino and the incorporated cities, as the "co-permittees", will develop site-specific compliance requirements, perform compliance monitoring and inspections, submit storm drain maps and compliance reports to the SBCFCD, exercise enforcement authority for achieving compliance, and review and implement stormwater management programs.

12. The SBCFCD obtains its authority to control pollutants in stormwater discharges, to prohibit illegal discharges and control spills, and to require compliance and carry out inspections of the storm drain systems in the County of San Bernardino from the San Bernardino County Flood Control Act and various county ordinances which address industrial wastes and waste discharges, and land use within the unincorporated areas of San Bernardino County and contract cities. The "co-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 stormwater/urban runoff discharges.

13. Currently, the SBCFCD does not have an active surface water quality monitoring program in the permitted area. However, the SBCFCD collects precipitation data from 102 precipitation stations and streamflow data from 60 recording gages and eight alert gages. The County has 112 inactive precipitation stations; historic records for these inactive precipitation stations are available at the SBCFCD.

14. A Water Quality Control Plan was adopted by the Regional Board on May 13, 1983. The Plan contains water quality objectives and beneficial uses of waters in the Santa Ana Region. On July 14, 1989, the Regional Board adopted a Basin Plan amendment, incorporating revised beneficial use designations for the ground and surface waters of the Region.

15. The requirements contained in this order are necessary to implement the Water Quality Control Plan.

16. An attempt has been made to incorporate all of the essential elements of the proposed federal stormwater regulations in this permit.

17. Stormwater discharges to the storm drain systems in San Bernardino County within the Santa Ana Region are tributary to various water bodies of the state. The identified water bodies are as follows (Only a portion of some of the water bodies listed below is within the dischargers' jurisdiction):

17. (cont'd)

Inland Surface Streams

A. Santa Ana River
Santa Ana River, Reaches 4, 5, and 6

B. San Bernardino Mountain Streams

Mill Creek Drainage

Mill Creek, Reaches 1 and 2
Mountain Home Creek
Mountain Home Creek, East Fork
Monkey Face Creek
Alger Creek
Falls Creek
Vivian Creek
High Creek
Other Tributaries: Lost, Oak Cove, Green, Skinner, Momyer and Glen Martin Creeks, and other Tributaries to these Creeks

Bear Creek Drainage
Bear Creek
Siberia Creek
Slide Creek
All Other Tributaries to these Creeks

Big Bear Lake Tributaries
North Creek
Metcalf Creek
Grout Creek
Rathbone (Rathbun) Creek
Other Tributaries to Big Bear Lake: Johnson, Minnelusa, Polique, and Red Ant Creeks, and other Tributaries to these Creeks

Baldwin Lake Drainage
Shay Creek
Other Tributaries to Baldwin Lake: Sawmill, Green, and Caribou Canyons and other Tributaries to these Creeks.

17. (cont'd)

C. Other Streams Draining to Santa Ana River (Mountain Reaches)

Cajon Creek
City Creek
Devil Canyon Creek
East Twin and Strawberry Creeks
Waterman Canyon Creek
Fish Creek
Forsee Creek
Plunge Creek
Barton Creek
Bailey Canyon Creek
Kimbark Canyon, East Fork Kimbark Canyon, Ames Canyon and West Fork Cable Canyon Creeks
Valley Reaches of Above Streams
Other Tributaries (Mountain Reach): Alder, Badger Canyon, Bledsoe Gulch, Borea Canyon, Breakneck, Cable Canyon, Cienega Seca, Cold, Converse, Coon, Crystal, Deer, Elder, Fredalba, Frog, Government, Hamilton, Heart Bar, Hemlock, Keller, Kilpecker, Little Mill, Little Sand Canyon, Lost, Meyer Canyon, Mile, Monroe Canyon, Oak, Rattlesnake, Round Cienega, Sand, Schneider, Staircase, Warm Springs Canyon and Wild Horse Creeks, and other tributary to these Creeks.

D. San Gabriel Mountain Streams (Mountain Reaches)
San Antonio Creek
Lytle Creek (South, Middle, and North Forks) and Coldwater Canyon Creek
Day and East Etiwanda Creeks
Valley Reaches of Above Streams
Cucamonga Creek (Mountain Reach)
Cucamonga Creek (Valley Reach)
Other Tributaries (Mountain Reaches): San Sevaine, Deer, Duncan Canyon, Henderson Canyon, Stoddard Canyon, Icehouse Canyon, Cascade Canyon, Cedar, Falling Rock, Kerkhoff and Cherry Creeks, and other Tributaries to these Creeks.

E. San Timoteo Area Streams
San Timoteo Creek, Reaches 1 and 2
Oak Glen, Potato Canyon and Birch Creeks
Yucaipa Creek

F. Prado Area Streams
Chino Creek

17. (cont'd)

G. Lake and Reservoirs
Baldwin Lake
Big Bear Lake
Jenks Lake

The beneficial uses of these water bodies include municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), industrial process supply (PROC), groundwater recharge (GWR), hydropower generation (POW), water contact recreation (REC-1), non-contact water recreation (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), wildlife habitat (WILD), and fish spawning (SPWN). The beneficial uses of individual water bodies are shown on Attachment "E".

18. Some of the storm drain systems in the project area discharge into storm drain systems controlled by other entities, such as the County of Riverside, which is regulated under the Regional Board's Order No. 90-104 (NPDES No. CA 8000192), the County of Orange, which is regulated under the Regional Board's Order No. 90-71, NPDES No. CA 8000180, and the County of Los Angeles, which is regulated under the Los Angeles Regional Board's Order No. 90-79, NPDES No. CA 0061654.

19. Due to the large number of water bodies covered in this order, it is necessary to prioritize these water bodies for the development and implementation of the stormwater management program to effectively control the pollutants in the stormwater discharges. The stormwater management program will be developed and implemented in three phases, Phases I, II, and III. In Phase I, the dischargers will be required to submit existing stormwater qualitative data and develop management and monitoring programs for those water bodies where beneficial uses are threatened or impaired due to runoff of stormwater and urban nuisance water. These water bodies include Reaches 4 and 5 of the Santa Ana River and its tributaries, and Prado area streams (Chino Creek). In Phase II, the dischargers will be required to submit existing stormwater qualitative data and to develop stormwater management and monitoring programs for Reaches 1 and 2 of San Timoteo Creek and its tributaries. In Phase III, the dischargers will be required to submit existing stormwater qualitative data and develop management and monitoring programs for Reach 6 of the SAR, San Bernardino Mountain streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.

20. Numeric and narrative water quality standards exist for the water bodies listed in Item No. 17, above. This permit does not contain numeric limitations for any constituents because the impact of stormwater discharges on the water quality of the above named receiving waters has not been fully determined. Extensive water quality monitoring and analysis of the data are essential to make that determination. This order requires the dischargers continue to monitor the stormwater discharges or begin monitoring as necessary, and to analyze the data. Additionally, the order also requires development and implementation of best management practices[1] (BMPs) in accordance with the WQA of 1987. It is anticipated that with the implementation of BMPs by the dischargers, the pollutants in the stormwater runoff will be reduced and the quality of the receiving waters will be improved. The ultimate goal of the urban stormwater runoff management program is to attain water quality consistent with the water quality objectives for the receiving waters to protect the beneficial uses.

21. With respect to industrial activities, the Regional Board currently regulates discharges of point source process wastewater and non-process wastewater and stormwater discharges to storm drain systems through NPDES permits. Point source discharges other than stormwater will continue to be regulated by the Regional Board. Industrial stormwater dischargers are required to cooperate with the SBCFCD to control the discharge of pollutants in the stormwater runoff from individual facilities or to obtain individual industrial stormwater discharge permits from the Regional Board.

22. Recognizing the need for public involvement and participation in the development and implementation of an effective stormwater/urban runoff management program, the Regional Board will conduct at least one workshop each year during the term of this permit. The purposes of the workshops will be to solicit comments and to inform the public of the progress of the program. Written comments submitted will be forwarded to the State Board, EPA, and the SBCFCD for their review and comments.

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[1] Best Management Practices (BMPs) are water quality management practices that are maximized in efficiency for the control of stormwater runoff pollution.

23. 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.

24. The Regional Board has considered an antidegradation analysis, pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, for this discharge. The Regional Board finds that the stormwater discharges are consistent with the federal and state antidegradation requirements and a complete antidegradation analysis is not necessary.

25. The Regional Board has notified the dischargers and interested agencies and persons 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.

26. 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 dischargers, 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 to manage the program overall, including:

1. Administer the San Bernardino County Flood Control Act.

2. Conduct water quality and hydrographic monitoring of the storm drain system outfalls as agreed upon by the Executive Officer.

3. Develop uniform criteria for storm drain system inspections.

4. Conduct inspections of the storm drain systems within its jurisdiction.

5. Implement management programs, monitoring programs, and implementation plans within its jurisdiction as required by this order.

I. RESPONSIBILITIES OF PRINCIPAL PERMITTEE - CONT'D

6. Prepare and submit to the Regional Board all the reports, plans, and programs as required in this order.

7. Monitor the implementation of the plans and programs and determine their effectiveness in attaining water quality objectives.

8. Coordinate all the activities with the Regional Board.

9. Enact legislation and ordinances as necessary to establish legal authority.

10. Obtain public input[2] for any proposed management and implementation plans.

11. Pursue enforcement actions as necessary to ensure compliance with stormwater management programs and implementation plans.

12. Respond to emergency situations such as accidental spills, leaks, illegal discharges/illicit connections etc. to prevent or reduce the discharge of pollutants to storm drain systems and waters of the United States.

II. RESPONSIBILITIES OF THE CO-PERMITTEES

The co-permittees shall be responsible to manage the program within its jurisdiction, including:

1. Administer the county and city ordinances.

2. Conduct storm drain system inspections in accordance with the uniform criteria developed by the principal permittee.

3. Conduct and coordinate with the principal permittee any surveys and characterizations needed to identify the pollutant sources and drainage areas.

4. Review and approve management programs, monitoring programs, and implementation plans.

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[2] Public input is demonstrated by: (1) disseminating the notice of availability of plans for review and comment to the public at large, environmental groups, federal, state and local agencies and other interested parties; and, (2) addressing concerns expressed by the public.

II. RESPONSIBILITIES OF THE CO-PERMITTEES - CONT'D

5. Implement management programs, monitoring programs, and implementation plans within each respective jurisdiction as required by this order.

6. Submit storm drain system maps to the principal permittee with periodic revisions as necessary.

7. Prepare and submit all reports to the principal permittee in a timely manner.

8. Enact legislation and ordinances as necessary to establish legal authority.

9. Pursue enforcement actions as necessary to ensure compliance with the stormwater management programs and the implementation plans.

10. Respond to emergency situations such as accidental spills, leaks, illegal discharges/illicit connections, etc. to prevent or reduce the discharge of pollutants to storm drain systems and waters of the United States.

III. GENERAL REQUIREMENTS

1. The dischargers shall prohibit illegal discharges from entering into the municipal storm drain systems. Discharges conditionally allowed to enter storm drain systems are specified in Item V.7.

2. The dischargers shall develop and implement best management practices (BMPs) to control discharge of pollutants to the maximum extent practicable[3] to waters of the United States. The BMPs so developed, along with a time schedule for implementation, shall be submitted for the approval of and/or modification by the Executive Officer of the Regional Board. In developing the best management practices, the dischargers shall consider the water quality objectives of all the receiving water bodies.

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[3] Maximum Extent Practicable (MEP) means to the maximum extent possible, taking into account equitable considerations of synergistic, additive, and competing factors, including but not limited to, gravity of the problem, fiscal feasibility, public health risks, societal concern, and social benefits.

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA

1. Runoff Quality/Quantity

The dischargers shall collectively submit all quantitative information, generated since 1980 or earlier where better information exists, on stormwater discharges to the storm drain systems. This information will be used to facilitate the identification of sources of pollutants present in the stormwater discharges and to develop an effective discharge monitoring program for this order. Information to be submitted shall include the following:

a. Any historical averages and extreme data for stormwater discharges;

b. Any analytical and flow data for stormwater samples collected from the storm drain system outfalls and for any waters of the United States;

c. Precipitation data from the precipitation stations and the duration of the storm events (if available);

d. Discharge data from the storm drain systems as determined from the gaging stations; and

e. Analysis of the data and the major pollutants identified in the stormwater discharges from each drainage area to waters of the United States and a determination whether the identified pollutants came from non-point source or point-source discharges.

2. System/Drainage Area Characterization

The dischargers shall submit information to the Regional Board for identification and characterization of the sources of pollutants in the stormwater discharges. The following information shall be provided:

a. An identification of all land use activities (e.g. divisions indicating undeveloped, residential, agricultural, commercial, and industrial uses) in each drainage area and a map showing the land use divisions and storm drain systems in each drainage area.

b. The locations of the storm drain outfalls discharging to waters of the United States. The name of each receiving water body shall be reported and the location of each outfall shall be indicated on a map.

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA - CONT'D

c. An identification of the major outfalls[4]. The locations of the major storm drain outfalls shall be distinguished from other storm drain outfalls as shown on a map in Item 1.b., above.

d. The sizes of these drainage areas (acreage) and the sizes (pipe diameters or approximate dimensions of the storm drain systems) and physical characteristics of the storm drain systems associated with major outfalls. These physical characteristics shall include, but not be limited to, whether the storm drain channel is lined or unlined and whether it has intermittent or continuous flow.

e. An estimate of a runoff coefficient[5] for each drainage area associated with a major outfall shall be provided.

f. The names, addresses, and Standard Industrial Codes (SIC) of specific industrial sources (both privately or publicly owned industrial facilities) in each drainage area discharging to the storm drain systems or waters of the United States. The point of connection of each specific industrial source to the storm drain systems or waters of the United States shall be located on a map.

g. The locations of major structural controls (e.g. retention basins, detention basins, recharge basins, oil/water separators, swales, wetlands, and siltation basins) for stormwater discharges.

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[4] A major storm drain outfall is an outfall of a storm drain channel that receives stormwater discharges from a) a drainage area of 50 acres or from b) an industrially used land of 2 acres, or an outfall that c) associated with a storm drain channel of 36-inch in pipe diameter or equivalent which receives stormwater discharges from a drainage area or an outfall that d) associated with a storm channel of 12-inch in pipe diameter or equivalent which receives stormwater discharges from an industrially used land.

[5] Runoff coefficient means the fraction of total rainfall that will appear at a conveyance as runoff.

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA - CONT'D

3. Illegal Discharges/Illicit Connections

   a. The dischargers shall provide a list of dischargers (permitted and unpermitted) known to exist currently who discharge process or non-process wastewater to the storm drain systems. The dischargers shall also provide any existing procedures used for detecting illegal discharges/illicit connections to the storm drain systems, the rationale for the procedures, and the drainage areas (or cities) in which these programs are practiced; and

   b. A description of the present and historic use of ordinances or other controls to prohibit the illegal discharges/illicit connections to storm drain systems.

4. Stormwater Management Program

   A description of the existing stormwater/urban runoff management programs and structural and non-structural BMPs implemented by the dischargers.

5. Stormwater/Urban Runoff Monitoring Program

   A description of the existing monitoring programs and the rationale for their selection.

6. Pollutant Information

   The dischargers shall provide information regarding the discharge of any pollutant required under 40 CFR 122.21(g)(7)(iii) and (iv).

7. Other Pertinent Existing Information

   The dischargers shall provide to the Regional Board any other existing information that is pertinent to this permit.

8. The dischargers shall submit the above information, IV.1. - IV.7., for various water bodies within the project area in accordance with the following schedule:

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA - CONT'D

Phase	Description of Water Body	Compliance Report Due
I	SAR, Reaches 4 & 5, other streams draining to SAR, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reaches).	10/31/91
II	San Timoteo Creek, Reaches 1 & 2, Oak Glen, Potato Canyon and Birch Creeks, and Yucaipa Creek.	06/30/92
III	SAR, Reach 6, San Bernardino Mountain Streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.	11/30/92

V. RECONNAISSANCE SURVEY

1. The dischargers shall submit information from a reconnaissance survey to be conducted at the storm drain systems. The purpose of the survey is to identify illegal discharges/illicit connections to the storm drain systems. The reconnaissance survey field manuals and implementation plans for prosecuting violators and eliminating illegal discharges so developed, along with time schedules for implementation, shall be submitted for the approval of and/or modification by the Executive Officer of the Regional Board.

2. A proposed reconnaissance survey field manual, including a time schedule, for each phase shall be submitted for approval and/or modification by the Executive Officer of the Regional Board according to the following schedule:

Phase	Description of Water Body	Compliance Report Due
I	SAR, Reaches 4 & 5, other streams draining to SAR, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reaches).	04/30/92
II	San Timoteo Creek, Reaches 1 & 2, Oak Glen, Potato Canyon and Birch Creeks, and Yucaipa Creek.	01/31/93
III	SAR, Reach 6, San Bernardino Mountain Streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.	07/31/93

V. RECONNAISSANCE SURVEY - CONT'D

3. The discharger shall implement the reconnaissance survey field manual after consideration of public comments and approval/modification of the manual by the Executive Officer of the Regional Board. The reconnaissance survey progress reports for each phase shall be submitted according to the following schedule:

Phase	Description of Water Body	Compliance Report Due
I	SAR, Reaches 4 & 5, other streams draining to SAR, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reaches).	04/30 of each year[6]
II	San Timoteo Creek, Reaches 1 & 2, Oak Glen, Potato Canyon and Birch Creeks, and Yucaipa Creek.	01/31 of each year[7]
III	SAR, Reach 6, San Bernardino Mountain Streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.	07/31 of each year[8]

4. The reconnaissance survey progress report shall contain the following information:

   a. Results of the reconnaissance survey, including an analysis of the results.

   b. Additional information that would lead to isolating and identifying sources of illegal discharges/illicit connections to the storm drain systems. Such information should include, but is not limited to, visual observations (e.g. color, turbidity, odor, etc), major land use activities in the surrounding drainage areas, seasonal change of flow, the surrounding hydrogeologic formation, etc.

   c. A listing of any identified or suspected illegal dischargers including the names, locations, and types of the facilities and the names of the storm drain systems and receiving waters the illegal discharges are discharged to.

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[6] The first progress report is due by April 30, 1993.

[7] The first progress report is due by January 31, 1994.

[8] The first progress report is due by July 31, 1

V. RECONNAISSANCE SURVEY - CONT'D

4. d. A listing of large industrial facilities (with more than 100 employees) where hazardous/toxic substances are stored and/or used, landfills, hazardous waste disposal, treatment, and/or recovery facilities, and any known spills, leaks or other problems in the area.

e. A discussion on all activities, related to the survey, conducted for the past 12 months.

5. The dischargers shall submit a proposed implementation plan, including a tentative time schedule, for each phase to prosecute violators and eliminate such discharges to the storm drain systems. The proposed plan shall also include a description of the legal authorities for prosecuting violators and eliminating or controlling illicit disposal practices and illegal discharges to the storm drain systems, and a proposed time schedule for obtaining such legal authorities, if necessary. The dischargers shall submit the proposed implementation plans according to the following schedule:

Phase	Description of Water Body	Compliance Report Due
I	SAR, Reaches 4 & 5, other streams draining to SAR, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reaches).	10/31/92
II	San Timoteo Creek, Reaches 1 & 2, Oak Glen, Potato Canyon and Birch Creeks, and Yucaipa Creek.	07/31/93
III	SAR, Reach 6, San Bernardino Mountain Streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.	01/31/94

6. The dischargers shall implement the program for prosecuting violators and eliminate illegal discharges to the storm drain systems after consideration of public comments and approval/modification of the program by the Executive Officer of the Regional Board. The dischargers shall submit the progress reports, evaluating the effectiveness of the plan in detecting and eliminating illegal discharges to the storm drain systems, for each phase according to the following schedule:

V. RECONNAISSANCE SURVEY - CONT'D

6. (cont'd)

Phase	Description of Water Body	Compliance Report Due
I	SAR, Reaches 4 & 5, other streams draining to SAR, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reaches).	10/31 of each year[9]
II	San Timoteo Creek, Reaches 1 & 2, Oak Glen, Potato Canyon and Birch Creeks, and Yucaipa Creek.	07/31 of each year[10]
III	SAR, Reach 6, San Bernardino Mountain Streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.	01/31 of each year[11]

7. The permittees shall effectively eliminate all identified illegal discharges/illicit connections in the shortest time practicable, and in no case later than October 1, 1995. Those illegal discharges/illicit connections identified after October 1, 1995 shall be eliminated in the shortest time practicable. The following discharges shall not be considered illegal discharges provided the discharges do not cause or contribute to violations of water quality standards and are not significant contributors of pollutants to waters of the United States: discharges composed entirely of stormwater, discharges covered under NPDES permits or waivers/clearances such as discharges to storm drain systems from potable water line flushing, diverted stream flows, discharges from potable water sources, dechlorinated swimming pool discharges, and air conditioning condensate, discharges from fire fighting, landscape irrigation, rising groundwaters (not including active dewatering systems), groundwater infiltration as defined at 40 CFR 35.2005(20), passive foundation drains (not including active groundwater dewatering), irrigation water, water from crawl space pumps, passive footing drains (not including active groundwater dewatering systems), lawn watering, individual residential vehicle

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[9] The first progress report is due by October 31, 1993.

[10] The first progress report is due by July 31, 1994.

[11] The first progress report is due by January 31, 1995.

V. RECONNAISSANCE SURVEY - CONT'D

7. (cont'd)

washing, flows from riparian habitats and wetlands, street wash waters related to cleaning and maintenance by permittees, or waters not otherwise containing wastes as defined in California Water Code Section 13050 (d). If it is determined that any of the preceding discharges cause or contribute to violations of water quality standards or are significant contributors of pollutants to waters of the United States, the permittees shall prohibit these discharges from entering storm drain systems.

VI. DRAINAGE AREA MANAGEMENT PROGRAM

1. The dischargers shall develop and implement best management practices (BMPs) to control the discharge of pollutants to waters of the United States. The discharger shall submit information pertaining to the proposed stormwater system management programs for approval of and/or modification by the Executive Officer of the Regional Board. The information shall include, but need not be limited to, the following:

   a. A brief description of any existing BMPs and stormwater management programs.

   b. Proposed modifications to the existing BMPs and stormwater/urban runoff management programs to reduce pollutants in the stormwater discharges from industrial, commercial, and residential areas to the maximum extent practicable. At a minimum, the following shall be considered in developing the BMPs:

      Structural Controls

      i. For the permitted area, wherever appropriate, structural controls such as first flush diversion, detention/retention basins, infiltration trenches/basins, porous pavement, oil/grease separators, grass swales, wire concentrators, etc.

VI. DRAINAGE AREA MANAGEMENT PROGRAM - CONT'D

Non-Structural Controls

ii. Programs to educate the public on proper disposal of hazardous/toxic wastes. These may include public workshops, meetings, notifications by mail, collection programs for household hazardous wastes, etc.

iii. Management practices such as street sweeping, proper maintenance of streambanks, erosion control structures, etc.

iv. Regulatory approaches such as county and local ordinances, permitting of construction sites, etc.

v. Enforcement programs, established by the county and cities, including response to emergency incidents, field inspections, and identification and elimination of illegal discharges/illicit connections to the storm drain systems.

c. An implementation plan for site-specific BMPs which are required to reduce pollutants in the stormwater discharges from residential, commercial and industrial areas, and construction sites. Requirements for the implementation of BMPs at these sites are described below:

i. New Construction Sites

Runoff from construction sites has the potential to adversely impact the quality of waters of the United States. A full range of structural and non-structural BMPs shall be required at new construction sites. All industrial/commercial construction operations that result in a disturbance of one acre or more of total land area (or a smaller parcel of land which is a part of a larger common development) and residential construction sites that result in a disturbance of five acres or more of total land area (or a smaller parcel of land which is a part of a larger common development) shall be required to develop and implement BMPs, including a long term funding mechanism and commitment to support required maintenance of the BMPs, to control erosion/siltation and contaminated runoff from the construction sites.

VI. DRAINAGE AREA MANAGEMENT PROGRAM - CONT'D

ii. Residential and Commercial/Industrial Sites

Numerous studies have shown that runoff from residential and commercial/industrial areas has contributed a number of pollutants to waters of the United States. As development progresses, the percentage of paved surface increases, the rate of runoff increases, and the amount of pollutants in the runoff also increases. To prevent the increase of pollutants in the stormwater discharges, all new developments and existing facilities with significant redevelopment, irrespective of their size, must develop individual comprehensive, long-term, post construction stormwater management plans, incorporating structural and non-structural BMPs. These management plans shall include a long term funding mechanism and commitment to support required maintenance of the BMPs.

d. A description of the legal authorities for implementing the programs, and a proposed time schedule for obtaining such legal authorities, if necessary.

e. A description of staff, equipment, and funds available to implement the programs.

2. The dischargers shall submit the BMPs so developed, along with a time schedule for implementation, for the approval of and/or modification by the Executive Officer of the Regional Board according to the following schedule:

Phase	Description of Water Body	Compliance Report Due
I	SAR, Reaches 4 & 5, other streams draining to SAR, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reaches).	10/31/92
II	San Timoteo Creek, Reaches 1 & 2, Oak Glen, Potato Canyon and Birch Creeks, and Yucaipa Creek.	04/30/93
III	SAR, Reach 6, San Bernardino Mountain Streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.	07/31/93

VI. DRAINAGE AREA MANAGEMENT PROGRAM - CONT'D

3. The dischargers shall implement the BMPs and other stormwater management programs after consideration of public comments and approval/modification of the programs by the Executive Officer of the Regional Board. The dischargers shall submit a progress report for each phase, assessing the reduction of pollutants discharged to waters of the United States and evaluating the effectiveness of the BMPs developed for the stormwater discharges. The dischargers shall also include recommended BMP modifications, with a time schedule for implementation, needed to achieve compliance with any water quality objectives not attained. The progress reports shall be submitted according to the following schedule:

Phase	Description of Water Body	Compliance Report Due
I	SAR, Reaches 4 & 5, other streams draining to SAR, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reach), Baldwin Lake, and Big Bear Lake.	10/31 of each year[12]
II	San Timoteo Creek, Reaches 1 & 2, Oak Glen, Potato Canyon and Birch Creeks, and Yucaipa Creek.	04/30 of each year[13]
III	SAR, Reach 6, San Bernardino Mountain Streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.	07/31 of each year[14]

[12] The first progress report is due by October 31, 1993.

[13] The first progress report is due by April 30, 1994.

[14] The first progress report is due by July 31, 1994.

VII. STORMWATER SYSTEM MONITORING PROGRAM

1. The dischargers shall submit a stormwater system monitoring program for approval of and/or modification by the Executive Officer. The objectives of the stormwater system monitoring program are:

   a. To define the type, magnitude (concentration and mass load), and sources of pollutants in the stormwater system discharges within each permittee's respective jurisdiction so that appropriate pollution prevention and correction measures can be identified;

   b. To evaluate the effectiveness of pollution prevention and correction measures; and

   c. To evaluate the compliance with water quality objectives established for the stormwater system or its components.

2. At a minimum, the stormwater system monitoring program shall include the following:

   a. A brief description of the existing monitoring programs.

   b. For both storm and non-storm conditions, sampling of the stormwater system discharges at major and representative outfalls discharging to waters of the United States to determine the pollutant loading rates to each receiving water body listed in Attachment "E".

   c. For both storm and non-storm conditions, a description of the number of monitoring stations, the locations of these monitoring stations, and the rationale for their selection.

   d. For both storm and non-storm conditions, a description of the physical, chemical, and biological parameters selected for analysis, the method of analysis, the type of sampling, and the sampling frequency proposed. The rationale for each of these selections shall be provided.

   e. Monitoring of the stormwater system discharges to identify illicit connections shall be conducted.

   f. Quality assurance and quality control plans for the stormwater system monitoring program shall be submitted.

VII. STORMWATER SYSTEM MONITORING PROGRAM - CONT'D

g. A data base that consolidates all monitoring information shall be maintained.

h. A description of the staff, equipment, and funds available to implement the monitoring program shall be provided.

i. A description of the legal authorities for implementing the program, and a proposed time schedule for obtaining such legal authorities (if necessary) shall be provided.

3. The dischargers shall submit the stormwater monitoring program so developed for each phase, along with a time schedule, for various water bodies in the project area according to the following schedule:

Phase	Description of Water Body	Compliance Report Due
I	SAR, Reaches 4 & 5, other streams draining to SAR, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reaches).	01/31/93
II	San Timoteo Creek, Reaches 1 & 2, Oak Glen, Potato Canyon and Birch Creeks, and Yucaipa Creek.	10/31/93
III	SAR, Reach 6, San Bernardino Mountain Streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.	04/30/94

4. The dischargers shall implement the stormwater system monitoring program after consideration of public comments and approval/modification of the program by the Executive Officer of the Regional Board. The dischargers shall submit a report for each phase on progress towards implementation of the approved monitoring program according to the following schedule:

VII. STORMWATER SYSTEM MONITORING PROGRAM - CONT'D

4. (cont'd)

Phase	Description of Water Body	Compliance Report Due
I	SAR, Reaches 4 & 5, other streams draining to SAR, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reaches), Baldwin Lake, and Big Bear Lake.	01/31 of each year[15]
II	San Timoteo Creek, Reaches 1 & 2, Oak Glen, Potato Canyon and Birch Creeks, and Yucaipa Creek.	10/31 of each year[16]
III	SAR, Reach 6, San Bernardino Mountain Streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.	04/30 of each year[17]

VIII. RECEIVING WATER MONITORING PROGRAM

1. The dischargers shall develop a receiving water monitoring program to assess the effects of pollutants from the stormwater system discharges on receiving water bodies, and to evaluate compliance with water quality objectives of the receiving water bodies. All the water bodies listed in Attachment "E" shall be addressed. The receiving water monitoring program shall be coordinated with the stormwater system monitoring program required under Section VII such that the aforestated objectives of the receiving water monitoring program will be achieved.

2. At a minimum, the receiving water monitoring program shall include the following:

   a. A brief description of any existing monitoring programs.

   b. A description of the number of monitoring stations, the location of these monitoring stations, and the rationale for their selection.

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[15] The first progress report is due by January 31, 1994.

[16] The first progress report is due by October 31, 1994.

[17] The first progress report is due by April 30, 1995.

VIII. RECEIVING WATER MONITORING PROGRAM

c. A description of the physical, chemical and biological parameters selected for analysis, the type of sampling, and the sampling frequency proposed. The rationale for each of these selections shall be provided.

d. Quality assurance and quality control plans for the receiving water monitoring program.

e. Maintenance of a data base that consolidates all monitoring information. This data base shall be coordinated with the data base required for the stormwater system monitoring program (VII.2.g.).

3. The dischargers shall submit the receiving water monitoring programs for various water bodies within the project area according to the following schedule:

Phase	Description of Water Body	Compliance Report Due
I	SAR, Reaches 4 & 5, other streams draining to SAR, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reaches).	01/31/93
II	San Timoteo Creek, Reaches 1 & 2, Oak Glen, Potato Canyon and Birch Creeks, and Yucaipa Creek.	10/31/93
III	SAR, Reach 6, San Bernardino Mountain Streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.	04/30/94

4. The dischargers shall implement the receiving water monitoring program after consideration of public comments and approval/modification of the program by the Executive Officer of the Regional Board. The discharger shall submit a report for each phase on progress towards implementation of the approved receiving water monitoring program according to the following schedule:

VIII. RECEIVING WATER MONITORING PROGRAM

Phase	Description of Water Body	Compliance Report Due
I	SAR, Reaches 4 & 5, other streams draining to SAR, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reaches).	01/31 of each year[18]
II	San Timoteo Creek, Reaches 1 & 2, Oak Glen, Potato Canyon and Birch Creeks, and Yucaipa Creek.	10/31 of each year[19]
III	SAR, Reach 6, San Bernardino Mountain Streams, Jenks Lake, Baldwin Lake, and Big Bear Lake.	04/30 of each year[20]

IX. FISCAL ANALYSIS

1. By July 31 of each year, a fiscal analysis of the capital and operation and maintenance expenditures necessary to accomplish the activities of the proposed plans and programs shall be performed.

2. By August 31, 1991 and every year thereafter, a fiscal analysis of the capital and operation and maintenance expenditures shall be submitted for review by EPA and the Regional Board.

X. DATA ANALYSIS

1. For the stormwater system monitoring program, the results of the chemical analysis and quantitative data (such as flow, precipitation, and discharge data) shall be compiled for each drainage area, each storm event, and for different times during the same storm event. The mass loading rates for the pollutants of concern shall be calculated.

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[18] The first progress report is due by January 31, 1994.

[19] The first progress report is due by October 31, 1994.

[20] The first progress report is due by April 30, 1995.

X. DATA ANALYSIS - CONT'D

2. An evaluation shall be performed for the calculated mass loading rates from the stormwater system monitoring program and the receiving water monitoring program. Any impact of the discharges from the stormwater systems on the receiving waters shall be discussed, starting with the most significantly impacted receiving water bodies. The evaluation shall be concluded with recommendations and the corrective actions proposed for any resulting discrepancies.

3. By January 31, 1994 and every year thereafter, the analysis of all the above data shall be submitted.

XI. PROGRAM ANALYSIS

1. The principal permittee shall conduct an analysis of the effectiveness of the overall stormwater management program. If the water quality objectives of the receiving waters are violated as a result of stormwater/urban runoff discharges, the principal permittee shall identify proposed programs which will result in the attainment of the water quality objectives, and a time schedule to implement the new programs.

2. By March 31, 1994 and every year thereafter, the analysis of the overall program and any proposed programs, to achieve compliance with water quality objectives of water bodies that have not been attained, shall be submitted.

XII. REPORTING

1. All reports shall be signed by the "principal permittee" or duly authorized representative of the dischargers and shall be submitted to EPA and the Regional Board under penalty of perjury.

2. A signed copy of the Implementation Agreement between the SBCFCD, the County of San Bernardino, and the cities shall be submitted by April 30, 1991. Any revisions to the Implementation Agreement shall be forwarded to the Executive Officer within 30 days of approval by all the dischargers.

3. Other reports and information required to be submitted to the Regional Board under the requirements specified above shall be reported in accordance with the following schedule:

XII. REPORTING

3. A. Phase I

TASK		COMPLIANCE REPORT DUE
a.	Existing reports and programs IV.1.-IV.7.	10/31/91
b.	Proposed Reconnaissance Survey Field Manual - V.2.	04/30/92
c.	Proposed Implementation Plan for Prosecuting Illegal Dischargers - V.4.	10/31/92
d.	Management Programs (BMPs) and Implementation Plan - VI.1.- VI.2.	10/31/92
e.	Stormwater Monitoring Program VII.1. - VII.3	01/31/93
f.	Receiving Water Monitoring Program VIII.1. - VIII.3.	01/31/93
g.	Progress Reports after Plan Implementation	
	i. Reconnaissance Survey Progress Report - V.3.	04/31 of each year[21]
	ii. Illegal Discharges - V.5.	10/31 of each year[22]
	iii. Management Programs - VI.3.	10/31 of each year[23]
	iv. Stormwater Monitoring Program VII.4.	01/31 of each year[24]
	v. Receiving Water Monitoring Program VIII.4.	01/31 of each year[25]

[21] The first progress report is due by April 30, 1993.

[22] The first progress report is due by October 31, 1993.

[23] The first progress report is due by October 31, 1993.

[24] The first progress report is due by January 31, 1994.

[25] The first progress report is due by January 31, 1994.

XII. REPORTING - CONT'D

3. B. Phase II

TASK		COMPLIANCE REPORT DUE
a.	Existing reports and programs IV.1. - IV.7.	06/30/92
b.	Proposed Reconnaissance Survey Field Manual - V.2.	01/31/93
c.	Proposed Implementation Plan for Prosecuting Illegal Dischargers - V.4.	07/30/93
d.	Management Programs (BMPs) and Implementation Plan - VI.1.- VI.2.	04/30/93
e.	Stormwater Monitoring Program VII.1.- VII.3.	10/31/93
f.	Receiving Water Monitoring Program VIII.1. - VIII.3.	10/31/93
g.	Progress Reports after Plan Implementation	
	i. Reconnaissance Survey Progress Report - V.3.	01/31 of each year[26]
	ii. Illegal Discharges - V.5.	07/31 of each year[27]
	iii. Management Programs - VI.3.	04/30 of each year[28]
	iv. Stormwater System Monitoring Program VII.4.	10/31 of each year[29]
	v. Receiving Water Monitoring Program VIII.4.	10/31 of each year[30]

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[26] The first Progress report is due by January 31, 1994.

[27] The first progress report is due by July 31, 1994.

[28] The first progress report is due by April 30, 1994.

[29] The first progress report is due by October 31, 1994.

[30] The first progress report is due by October 31, 1994.

XII. REPORTING - CONT'D

3. C. Phase III

TASK		COMPLIANCE REPORT DUE
a.	Existing reports and programs IV.1. - IV.7.	11/30/92
b.	Proposed Reconnaissance Survey Field Manual - V.2.	07/31/93
c.	Proposed Implementation Plan for Prosecuting Illegal Dischargers - V.4.	01/31/94
d.	Management Programs (BMPs) and Implementation Plan - VI.1.- VI.2.	07/31/93
e.	Stormwater Monitoring Program VII.1.- VII.3.	04/30/94
f.	Receiving Water Monitoring Program VIII.1. - VIII.3.	04/30/94
g.	Progress Reports after Plan Implementation	
	i. Reconnaissance Survey Progress Report - V.3.	07/31 of each year[31]
	ii. Illegal Discharges - V.5.	01/31 of each year[32]
	iii. Management Programs - VI.3.	07/31 of each year[33]
	iv. Stormwater System Monitoring Program VII.4.	10/31 of each year[34]
	v. Receiving Water Monitoring Program VIII.4.	10/31 of each year[35]

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[31] The first Progress report is due by July 31, 1994.

[32] The first progress report is due by January 31, 1995.

[33] The first progress report is due by July 31, 1994.

[34] The first progress report is due by October 31, 1994.

[35] The first progress report is due by October 31, 1994.

XII. REPORTING - CONT'D

3. D. General Reporting

a.	Fiscal Analysis	08/31 of each year[36]
b.	Data Analysis	01/31 of each year[37]
c.	Program Analysis	03/31 of each year[38]
d.	Compliance - Illegal Discharges	See Item V.7.

XIII. EXPIRATION AND RENEWAL

1. This Order expires on October 1, 1995 and the discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Code of Regulations not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements. This report of waste discharge shall include, but is not limited to, the following:

   a. Summary of the results of the monitoring program.

   b. Summary of the BMPs implemented and evaluations of their effectiveness.

   c. Summary of procedures implemented to detect, identify, and eliminate illegal discharges and illicit disposal practices and an evaluation of their effectiveness.

   d. Summary of enforcement procedures and actions taken to require stormwater dischargers to comply with the approved stormwater management programs.

   e. Summary of measures implemented to control pollutants in surface runoff from construction sites and an evaluation of their effectiveness.

   f. Evaluation of the need for additional BMPs, source control, and/or structural control measures.

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[36] The first annual fiscal analysis is due by August 31, 1991.

[37] The first data/program analysis is due by January 31, 1994.

[38] The first program analysis is due by March 31, 1994.

XIII. EXPIRATION AND RENEWAL- CONT'D

1. (cont'd)

   g. Proposed plan of stormwater/urban runoff quality management activities that will be undertaken during the term of the next permit.

   h. Any significant changes to the storm drain systems, outfall locations, detention/retention basins, and structural/non-structural controls.

2. This order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Clean Water Act, or amendments thereto, and shall become effective 10 days after date of its adoption, provided that the Regional Administrator of the Environmental Protection Agency has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

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 October 19, 1990.

Gerard J. Thibeault
Executive Officer

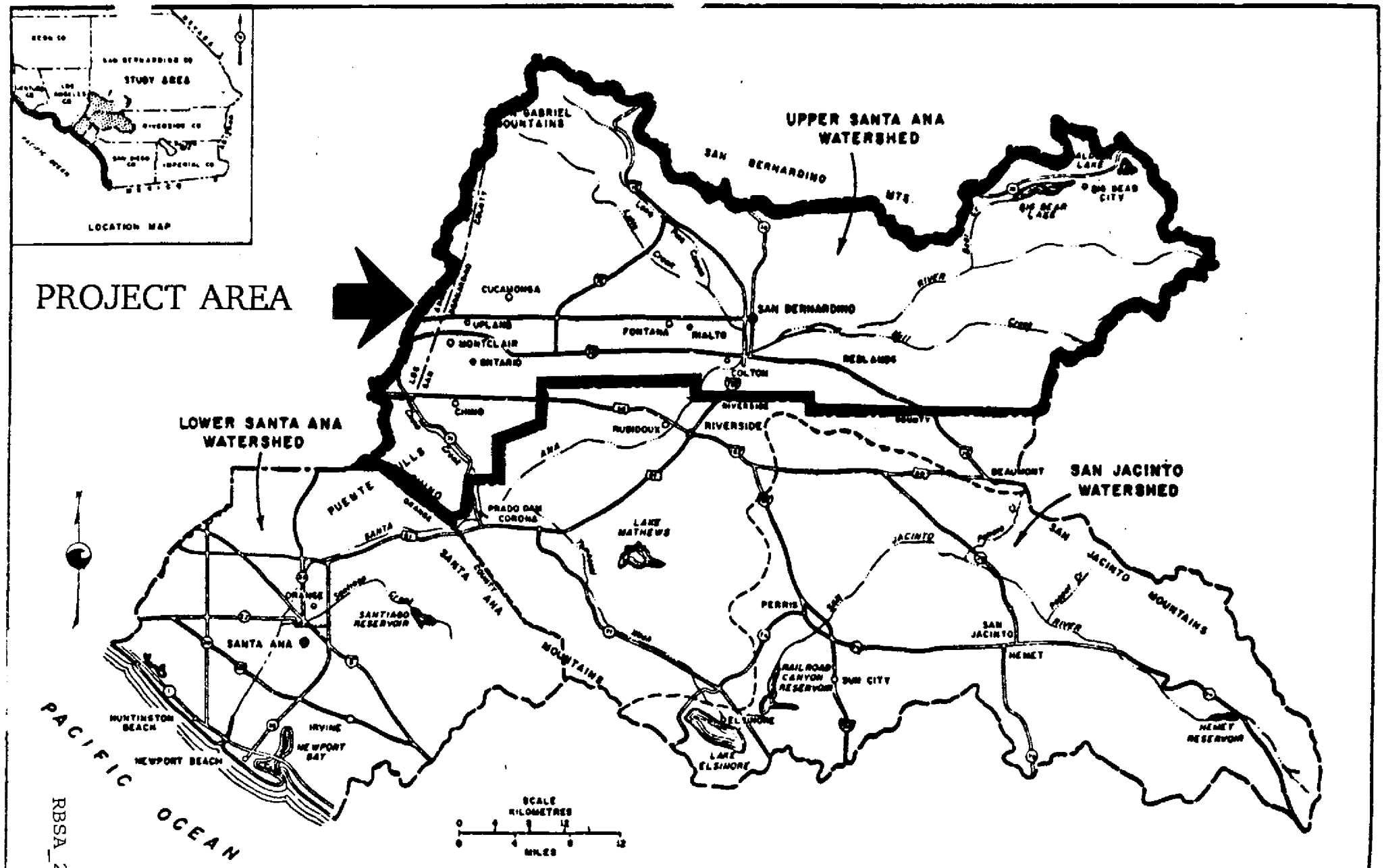


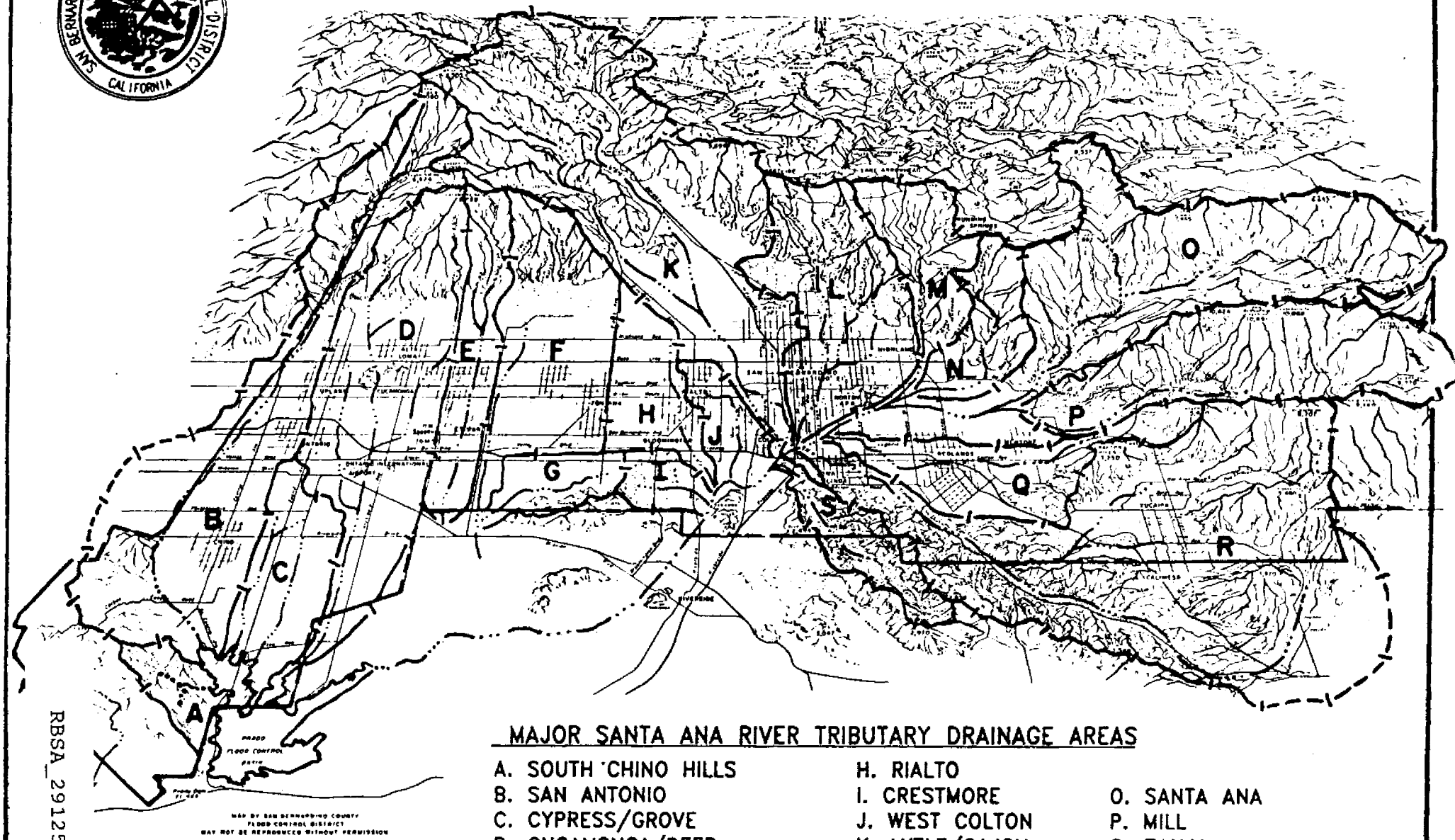
FIGURE I - SANTA ANA PLANNING AREA

OLPAR ... WATER RESOURCES, SOUTHERN DISTRICT, 1982

RBSA_29124

SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT

MAP OF UPPER SANTA ANA RIVER WATERSHED

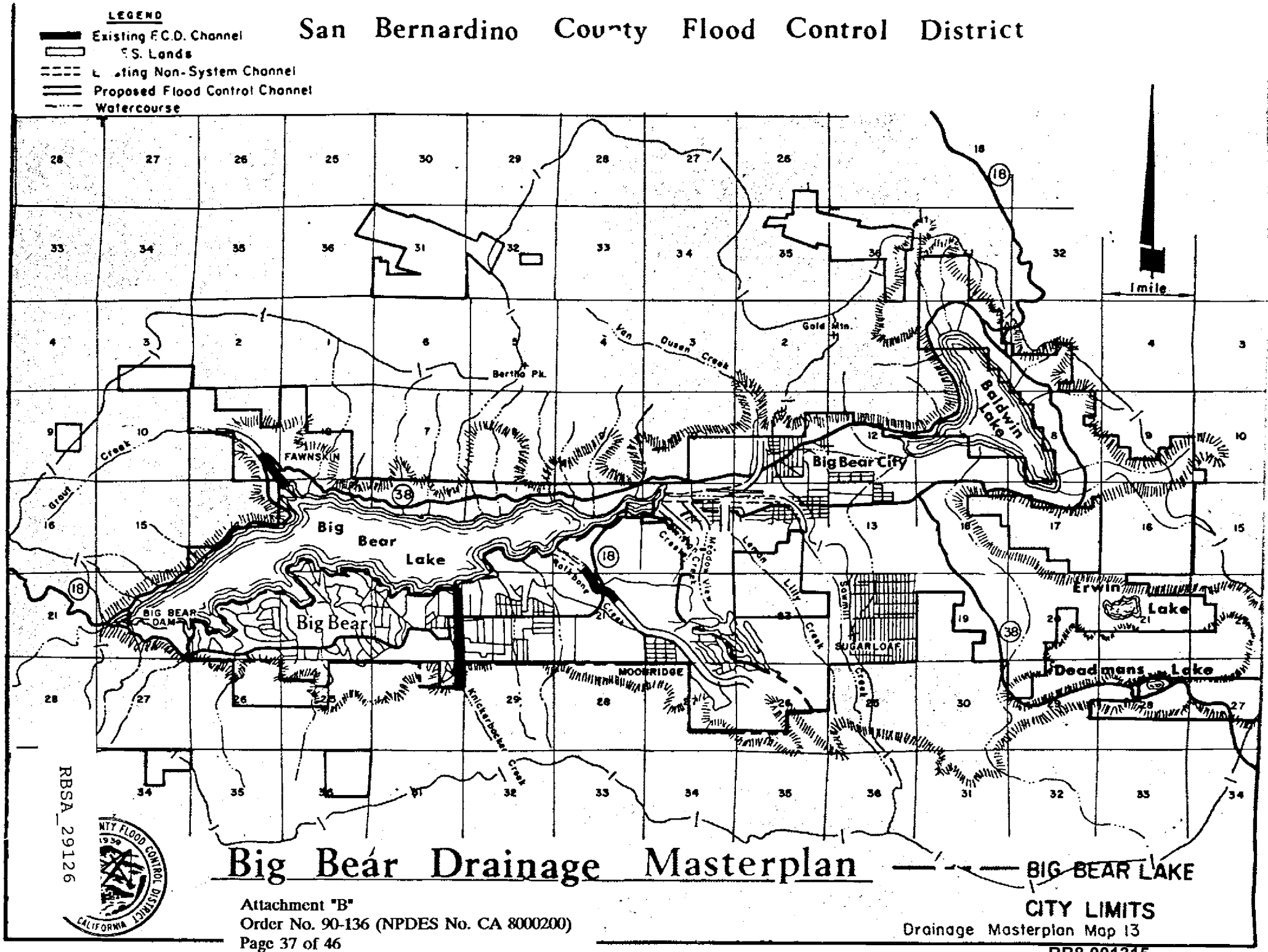


MAJOR SANTA ANA RIVER TRIBUTARY DRAINAGE AREAS

A. SOUTH CHINO HILLS
B. SAN ANTONIO
C. CYPRESS/GROVE
D. CUCAMONGA/DEER
E. DAY
F. ETIWANDA/SAN SEVAINE
G. DECLEZ
H. RIALTO
I. CRESTMORE
J. WEST COLTON
K. LYTLE/CAJON
L. TWIN/WARM
M. CITY CREEK
N. PLUNGE
O. SANTA ANA
P. MILL
Q. ZANJA
R. SAN TIMOTEO
S. RECHE

RBSA_29125

RB8 001314
S.B.C.F.C.D. Planning File PM-DI-128



Attachment "B"
Order No. 90-136 (NPDES No. CA 8000200)
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POPULATION ESTIMATES FOR CITIES AND UNINCORPORATED AREAS OF SAN BERNARDINO COUNTY WITHIN THE SANTA ANA RIVER BASIN

CITY	1990 POPULATION ESTIMATE
Big Bear Lake	6,640
Chino	59,620
Colton	39,730
Fontana	87,380
Grand Terrace	11,420
Highland	32,760
Loma Linda	15,560
Montclair	27,110
Ontario	129,290
Rancho Cucamonga	114,950
Redlands	62,940
Rialto	70,330
San Bernardino	159,920
Upland	64,970
Yucaipa	28,360
Unincorporated Area	188,430
Total	1,099,410

Attachment "C"
Order No. 90-136
NPDES No. CA 8000200
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LIST OF OTHER ENTITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS TO STORMWATER FACILITIES

Government Aoencies

U.S. Army Corps of Engineers
Department of the Air Force - Norton Air Force Base
U. S. Forest Service - San Bernardino National Forest
California Department of Transportation (CalTrans)
California Parks Department - Chino Hills State Park

Hospitals

Bear Valley Community Hospital
Chino Community Hospital
Doctors Hospital
Kaiser Foundation Hospital
Loma Linda Community Hospital
Loma Linda University Medical Center
Mountains Community Hospital
Ontario Community Hospital
Patton State Hospital
Pettis Memorial V. A. Hospital
Redlands Community Hospital
Saint Bernardine,s Hospital
San Antonio Community Hospital
San Bernardino Community Hospital
San Bernardino County Hospital

Railroads

AT&SF Railway Company
Southern Pacific Railroad Company

School Districts

Alta Loma Elementary School District
Bear Valley Unified School District
Central Elementary School District
Chaffey Joint Union High School District
Chino Unified School District
Colton Joint Unified School District
Cucamonga Elementary School District
Etiwanda Elementary School District
Fontana Unified School District
Mountain View Elementary School District
Mt. Baldy Joint Elementary School District
Ontario-Montclair Elementary School District
Rialto Unified School District
Rim of the World Unified School District
Redlands Unified School District
San Bernardino City Unified School District
Upland Unified School District
Yucaipa Joint Unified School District

Universities and Colleges

California State University San Bernardino
Chaffey College
Crafton Hills College
San Bernardino Valley College

Water Districts

Big Bear Municipal Water District
Chino Basin Municipal Water District
Cucamonga County Water District
East Valley Water District
Monte Vista Water District
San Bernardino County Waterworks District No. 8
San Bernardino Valley Municipal Water District
South San Bernardino Water District
West San Bernardino County Water District
Yucaipa Valley Water District

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
INLAND SURFACE STREAMS - Continued																		
UPPER SANTA ANA RIVER BASIN																		
Santa Ana River																		
Reach 3- Prado Dam to Mission Blvd.in Riverside	+	X			X			X	X		X			X				
Reach 4- Mission Blvd. in Riverside to San Jacinto Fault in San Bernardino	+			X	X			X	X		X			X				
Reach 5- San Jacinto Fault to Confluence with Bear Creek	X	X			I		X	X	X		I	X		X				
Reach 6- Confluence with Bear Creek to Headwaters (See also Individual Tributary Streams)	X	X			X			X	X			X		X		X		
San Bernardino Mountain Streams																		
Mill Creek Drainage:																		
Mill Creek:																		
Reach 1- Confluence with Santa Ana River to Bridge Crossing Route 38 at Upper Powerhouse	I	I			I			I	I			I		I				
Reach 2- Bridge Crossing Route 38 at Upper Powerhouse to Headwaters	X	X			X		X	X	X			X		X				
Mountain Home Creek	X				X		X	X	X			X		X				
Mountain Home Creek, East Fork	X				X		X	X	X			X		X		X		
Monkey Face Creek	X				X			X	X			X		X				
Alger Creek	X				X			X	X			X		X				
Falls Creek	X				X		X	X	X			X		X		X		
Vivian Creek	X				X			X	X			X		X				
High Creek	X				X			X	X			X		X				
Other Tributaries: Lost, Oak Cove, Green, Skinner, Momyer and Glen Martin Creeks, and other Tributaries to these Creeks	I				I			I	I			I		I				

\+ Excepted from MUN by Reg. Bd. Res. 89-42

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

RBSA_29130
RB8 001319

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
INLAND SURFACE STREAMS - Continued																		
UPPER SANTA ANA RIVER BASIN - Continued																		
San Bernardino Mountain Streams - Continued																		
Bear Creek Drainage:																		
Bear Creek	X	X			X		X	X	X			X		X		X		
Siberia Creek	X				X			X	X			X		X				
Slide Creek	I				I			I	I			I		I				
All other Tributaries to these Creeks	I				I			I	I			I		I				
Big Bear Lake (see Lakes, p. 2-13)																		
Big Bear Lake Tributaries:																		
North Creek	X				X			X	X			X		X		X		
Metcalf Creek	X				X			X	X			X		X		X		
Grout Creek	X				X			X	X			X		X		X		
Rathbone (Rathbun) Creek	X				X			X	X			X		X				
Other Tributaries to Big Bear Lake: Johnson, Minnelusa, Polique, and Red Ant Creeks, and other Tributaries to these Creeks	I				I			I	I			I		I				
Baldwin Lake Drainage:																		
Baldwin Lake (see Lakes, p. 2-13)																		
Shay Creek	X				X			X	X			X		X				
Other Tributaries to Baldwin Lake: Sawmill, Green, and Caribou Canyons and other Tributaries to these Creeks	I				I			I	I			I		I				

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
INLAND SURFACE STREAMS - Continued																		
UPPER SANTA ANA RIVER BASIN - Continued																		
Other Streams Draining to Santa Ana River (Mountain Reaches)																		
Cajon Creek	X				X			X	X			X		X				
City Creek	X	X			X			X	X			X		X		X		
Devil Canyon Creek	X				X			X	X			X		X				
East Twin and Strawberry Creeks	X	X			X			X	X			X		X		X		
Waterman Canyon Creek	X				X			X	X			X		X				
Fish Creek	X				X			X	X			X		X		X		
Forsee Creek	X				X			X	X			X		X		X		
Plunge Creek	X	X			X			X	X			X		X				
Barton Creek	X	X			X			X	X			X		X				
Bailey Canyon Creek	I				I			I	I			I		I				
Kimbark Canyon, East Fork Kimbark Canyon, Ames Canyon and West Fork Cable Canyon Creeks	X				X			X	X		X	X		X				
Valley Reaches of Above Streams	I				I			I	I		I			I				
Other Tributaries (Mountain Reaches): Alder, Badger Canyon, Bledsoe Gulch, Borea Canyon, Breakneck, Cable Canyon, Cienega Seca, Cold, Converse, Coon, Crystal, Deer, Elder, Fredalba, Frog, Government, Hamilton, Heart Bar, Hemlock, Keller, Kilpecker, Little Mill, Little Sand Canyon, Lost, Meyer Canyon, Mile, Monroe Canyon, Oak, Rattlesnake, Round Cienega, Sand, Schneider, Staircase, Warm Springs Canyon and Wild Horse Creeks, and other tributary to these Creeks	I				I			I	I			I		I				

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
INLAND SURFACE STREAMS - Continued																		
UPPER SANTA ANA RIVER BASIN - Continued																		
San Gabriel Mountain Streams (Mountain Reaches)																		
San Antonio Creek	X	X	X	X	X		X	X	X			X		X				
Lytle Creek (South, Middle and North Forks) and Coldwater Canyon Creek	X	X	X	X	X		X	X	X			X		X				
Day and East Etiwanda Creeks	X			X	X			X	X			X		X				
Valley Reaches of Above Streams	I				I			I	I		I			I				
Cucamonga Creek (Mountain Reach)	X		X	X	X		X	X	X			X		X		X		
Cucamonga Creek (Valley Reach)	+				I			I	I		I			I				
Other Tributaries (Mountain Reaches): San Sevaine, Deer, Duncan Canyon, Henderson Canyon, Bull, Fan, Demens, Thorpe, Angalls, Telegraph Canyon, Stoddard Canyon, Icehouse Canyon, Cascade Canyon, Cedar, Falling Rock, Kerkhoff and Cherry Creeks, and other Tributaries to these Creeks	I				I			I	I			I		I				
San Timoteo Area Streams																		
San Timoteo Creek																		
Reach 1- Santa Ana River Confluence to Gauge at San Timoteo Canyon Road	+	X			X			X	X		X			X				
Reach 2- Gauge at San Timoteo Canyon Road to Confluence with Yucaipa Creek	+	X			X			X	X		X			X				
Reach 3- Confluence with Yucaipa Creek to Section 24, T2S, R3W (Bunker Hill II Boundary)	+				X			X	X		X			X				
Reach 4- Section 24, T2S, R3W (Bunker Hill II Boundary) to Confluence with Little San Gorgonio and Noble Creeks (Headwaters of San Timoteo Creek)	+				X			X	X		X			X				
Oak Glen, Potato Canyon and Birch Creeks	X				X			X	X		X			X				
Little San Gorgonio Creek	X				X			X	X			X		X				
Yucaipa Creek	I				I			I	I		I			I				
Other Tributaries to these Creeks- Valley Reaches	I				I			I	I		I			I				
Other Tributaries to these Creeks- Mountain Reaches	I				I			I	I			I		I				

+ Excepted from MUN by Reg. Bd. Res. 89-42 or 89-99

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
INLAND SURFACE STREAMS - Continued																		
UPPER SANTA ANA RIVER BASIN - Continued																		
Prado Area Streams																		
Tequesquite Arroyo (Sycamore Creek)	+				I			I	I		I			I				
Chino Creek	+				X			X	X		X			X				
Temescal Creek																		
Reach 1- Santa Ana River Confluence to Riverside Canal	+	X	X		X			X[3]	X		X			X				
Reach 2- Riverside Canal to Lee Lake	+	I	I		I			I	I		I			I				
Reach 3- Lee Lake (see Lakes, p. 2-13)																		
Reach 4- Lee Lake to Mid-section line of Sect. 17 (downstream end of freeway cut)	+	I			I			I	I		I			I				
Reach 5- Mid-section line of Sect. 17 (downstream end of freeway cut) to Elsinore Groundwater Subbasin Boundary	+	I			I			I	I		I			I				
Reach 6- Elsinore Groundwater Subbasin Boundary to Lake Elsinore Outlet	+				I			I	I		I			I				
Coldwater Canyon Creek	X	X			X			X	X		X			X				
Bedford Canyon Creek	+				I			I	I		I			I				
Other Tributaries to these Creeks	I				I			I	I		I			I				

+ Excepted from MUN by Reg. Bd. Res. 89-42
3 Access prohibited in some portions by Riverside County Flood Control

X= Present or Potential Beneficial Use
I= Intermittent of Potential Beneficial Use

TABLE 2-1
BENEFICIAL USES

Water Body	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL
LAKES AND RESERVOIRS																		
UPPER SANTA ANA RIVER BASIN																		
Baldwin Lake	+							I	I		I	I		I				
Big Bear Lake	X	X			X			X	X		X	X		X				
Evans Lake	+							X	X		X	X		X				
Jenks Lake	X	X			X			X	X			X		X				
Lee Lake	+	X	X		X			X	X		X			X				
Mathews, Lake	X	X	X	X	X			X[4]	X		X			X	X			
Mockingbird Reservoir	+	X						X[5]	X		X			X				
Norconian, Lake	+							X	X		X			X				
LOWER SANTA ANA RIVER BASIN																		
Anaheim lake	+				X			X	X		X			X				
Irvine lake (Santiago Reservoir)	X	X						X	X		X	X		X				
Laguna, Lambert, Peters Canyon, Rattlesnake, Sand Canyon and Siphon Reservoirs	+	X						X[6]	X		X			X				
SAN JACINTO RIVER BASIN																		
Canyon Lake (Railroad Canyon Reservoir)	X	X			X			X	X		X			X				
Elsinore, Lake	+							X	X		X			X				
Fulmor, Lake	X	X						X	X		X	X		X				
Hemet, Lake	X	X			X			X	X		X	X		X		X		
Perris, Lake	X	X	X	X	X			X	X		X	X		X				

Beneficial Use

+ Excepted from MUN by Reg. Bd. Res. 89-42
4 Access prohibited by the Metropolitan Water District
5 Access prohibited by the Gage Canal Company (owner-operator)
6 Access prohibited by Irvine Ranch Company (owner)

X= Present or Potential Beneficial Use
I= Intermittent Beneficial Use

California Regional Water Quality Control Board
Santa Ana Region

October 19, 1990

ITEM: 10

SUBJECT: Waste Discharge Requirements for the San Bernardino County Transportation/Flood Control Department, the County of San Bernardino, and the Incorporated Cities of San Bernardino County Within the Santa Ana Region, Stormwater Runoff Management Program, San Bernardino County, Order No. 90-136 (NPDES No. CA 8000200)

DISCUSSION:

See attached Fact Sheet.

RECOMMENDATION:

Adopt Order No. 90-136, NPDES No. CA 8000200, as presented.

In addition to the dischargers, comments were solicited from the following agencies and/or persons:

U. S. Environmental Protection Agency - Robert Wills, Pretreatment, Sludge, and Stormwater Section
U.S. Army District, Los Angeles, Corps of Engineers - Permits Section
NOAA, National Marine Fisheries Service
U.S. Fish and Wildlife Service
State Water Resources Control Board - Ted Cobb, Office of the Chief Counsel
State Water Resources Control Board - Archie Matthews, Division of Water Quality
State Department of Water Resources - Los Angeles
California Regional Water Quality Control Board, San Francisco Bay Region (2) - Tom Mumley
California Regional Water Quality Control Board, Los Angeles Region (4) - David Gildersleeve
California Regional Water Quality Control Board, Central Valley Region (5) - Wayne Pierson
California Regional Water Quality Control Board, Colorado River Basin Region (7)
California Regional Water Quality Control Board, Lahonton Region (6)
State Department of Fish and Game
State Department of Health Services - Santa Ana
State Department of Health Services - San Diego
State Department of Health Services - San Bernardino
State Department of Parks and Recreation - Henry R. Agonia
Orange County Health Care Agency - Robert Merryman

Orange County Environmental Management Agency, Environmental Resources Division - Bob Collacott
San Bernardino County Department of Health Services - Paul Ryan
Riverside County Health Department - John Fanning
Riverside County Flood Control & Water Conservation District - Frank Peairs
South Coast Air Quality Management District, El Monte - James Lents
Brown & Caldwell - Jack Baylis
Uribe And Associates - Geoff Brosseau
Bill Dendy & Associates - Bill Dendy
Building Industry Association - Governmental Affairs Council
L.A. County Department of Public Works - John Mitchell
Sierra Club, San Gorgonio Chapter
Sierra Club, Los Angeles Chapter - Dick Hingson
Natural Resources Defense Council (NRDC) - Los Angeles
Tri-County Conservation League - Gertrude Hagum
Press Enterprise
Los Angeles Times
Santa Ana Watershed Project Authority - Neil Cline
Orange County Water District - Bill Mills
Metropolitan Water District - Ed Means
Big Bear Municipal Water District
Chino Basin Municipal Water District
Cucamonga County Water District
East Valley Water District
Monte Vista Water District
San Bernardino County Waterworks District No. 8
San Bernardino Valley Municipal Water District - Louis Fletcher
South San Bernardino Water District
West San Bernardino County Water District
Yucaipa Valley Water District - Joe Bocanegra
Caltrans, District 8 - San Bernardino
Southern Pacific Railroad - David Long
Atchison, Topeka & Santa Fe Railway Company - David Clark
Department of the Air Force, Norton Air Force Base
U. S. Forest Service - San Bernardino National Forest
Bear Valley Community Hospital
Chino Community Hospital
Doctors Hospital
Kaiser Foundation Hospital
Loma Linda Community Hospital
Loma Linda University Medical Center
Mountains Community Hospital
Ontario Community Hospital
Patton State Hospital
Pettis Memorial V. A. Hospital
Redlands Community Hospital
Saint Bernardines Hospital
San Antonio Community Hospital
San Bernardino Community Hospital

California State University, San Bernardino
Chaffey College
Crafton Hills College
Loma Linda University
University of Redlands
San Bernardino Valley College
Alta Loma Elementary School District
Bear Valley Unified School District
Central Elementary School District
Chaffey Joint Union High School District
Chino Unified School District
Colton Joint Unified School District
Cucamonga Elementary School District
Etiwanda Elementary School District
Fontana Unified School District
Mountain View Elementary School District
Mt. Baldy Joint Elementary School District
Ontario-Montclair Elementary School District
Rialto Unified School District
Rim of the World Unified School District
Redlands Unified School District
San Bernardino City Unified School District
Upland Unified School District
Yucaipa Joint Unified School District

California Regional Water Quality Control Board
Santa Ana Region
6809 Indiana Avenue, Suite 200
Riverside, CA 92506-4298

FACT SHEET

PROJECT

The attached pages contain information concerning an application for waste discharge requirements and a National Pollutant Discharge Elimination System (NPDES) permit. Order No. 90-136, NPDES No. CA 8000200, prescribes waste discharge requirements for urban stormwater runoff from the cities and the unincorporated areas in San Bernardino County within the jurisdiction of the Santa Ana Regional Board. On August 29, 1990, the San Bernardino County Flood Control District (SBCFCD) and the County of San Bernardino, in cooperation with the cities of Big Bear Lake, Chino, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa (hereinafter collectively referred to as the dischargers), submitted NPDES Application No. CA 8000200 for an areawide stormwater discharge permit under the National Pollutant Discharge Elimination System (NPDES). As part of the permit application, a topographic map, a drainage map, storm drain system maps, 1990 city-population estimate, and listings of cities and entities participating in this program were submitted. Copies of ordinances relevant to the urban stormwater runoff from the cities participating in this program and the draft Implementation Agreement between the County and the cities will be submitted at a later date.

PROJECT AREA

The permitted area is delineated by the Santa Ana-Lahonton Regional Board boundary line on the north and northeast, the Santa Ana-Colorado River Basin Regional Board boundary line on the east, the San Bernardino-Riverside County boundary line on the south and southeast, the San Bernardino-Orange County boundary line on the southwest, and the San Bernardino-Los Angeles County boundary line on the west (see Attachment "A").

CLEAN WATER ACT REQUIREMENTS

The Federal Clean Water Act (CWA) allows the U. S. Environmental Protection Agency (EPA) to delegate its NPDES permitting authority to states with an approved environmental regulatory program. The State of California is one of the delegated states. The Porter Cologne Act (California Water Code) authorizes the State Board, through its Regional Boards, to regulate and control the discharge of pollutants into waters of the state and tributaries thereto.

RBSA 22839
RB8 001328

CLEAN WATER ACT REQUIREMENTS - CONT'D

Section 405 of the Water Quality Act (WQA) of 1987 added Section 402(p) to the CWA. Pursuant to Section 402(p)(4) of the CWA, the EPA is required to promulgate regulations for stormwater permit applications for stormwater discharges associated with industrial activities and municipal separate storm drain systems serving a population of 100,000 or more. Section 402 (p)(4) of the CWA also requires dischargers of stormwater associated with industrial activities and municipal separate storm drain systems serving a population of 250,000 or more to file stormwater permit applications by February 4, 1990.

On December 7, 1988, EPA published its proposed regulations in the Federal Register to solicit public comments. Final regulations are tentatively scheduled to be promulgated on October 31, 1990 and to be published in the Federal Register in mid November, 1990. In the absence of final stormwater regulations, a permit governing municipal stormwater discharges should meet both the statutory requirements of Section 402 (p)(3)(B) and all requirements applicable to a NPDES permit issued under the issuing authority's discretionary authority in accordance with Section 402 (a)(1)(B) of the CWA.

AREAWIDE STORMWATER PERMIT

To regulate and control stormwater discharges from the San Bernardino County area to the San Bernardino County storm drain systems, an areawide approach is essential. The entire storm drain system is not controlled by a single entity; the SBCFCD, several cities, and the State Department of Transportation (Caltrans) manage the system. In addition to the cities and the SBCFCD, there are a number of other significant contributors of urban stormwater runoff to these storm drain systems. These include: large institutions such as the State University system, schools, hospitals etc.; federal facilities such as military installations etc.; state agencies such as Caltrans; water and wastewater management agencies such as San Bernardino Valley Municipal Water District and Chino Basin Municipal Water District; the National Forest Service; and state parks. The management and control of the entire flood control system cannot be effectively carried out without the cooperation and efforts of all these entities. Also, it would not be meaningful to issue a separate stormwater permit to each of the entities within the permitted area whose land/facilities drain into the county storm drain systems. The Regional Board and a majority of the cities and the county have concluded that the best management option for the San Bernardino County area is to issue an areawide stormwater permit.

AREAWIDE STORMWATER PERMIT - CONT'D

Some of the storm drain systems in the project area discharge into storm drain systems controlled by other entities, such as the County of Riverside, which is regulated under the Regional Board's Order No. 90-104 (NPDES No. CA 8000192), the County of Orange, which is regulated under the Regional Board's Order No. 90-71, NPDES No. CA 8000180, and the County of Los Angeles , which is regulated under the Los Angeles Regional Board's Order No. 90-79, NPDES No. CA 0061654. A majority of the San Bernardino County drainage areas lies within the Lahonton and Colorado River Basin Regions of the Regional Water Quality Control Board. Urbanization of the San Bernardino County drainage areas within the Lahonton and Colorado River Basin Regional Boards is minimal in comparison to that in the drainage areas under the Santa Ana Regional Board's jurisdiction. Therefore, early areawide stormwater permits for stormwater discharges from the drainage areas of San Bernardino County within the jurisdiction of the Lahonton and Colorado River Basin Regional Boards are not expected at this time.

COORDINATION WITH OTHER REGIONAL AGENCIES

In developing best management practices and monitoring programs, consultation/coordination with other flood control districts and other regional boards is essential. Regional Board staff will coordinate the program with other regional boards and other flood control districts/cities on an "as needed" basis.

EXISTING FACILITIES AND PROGRAMS

Within the Santa Ana Region, the SBCFCD serves a population of approximately 1.11 million, occupying an area of approximately 985 square miles. The County has estimated 258 miles of above-ground and 241 miles of below-ground storm drain channels in the project area. Approximately seven percent (7%) of the San Bernardino County area drains into water bodies within this Regional Board's jurisdiction. Stormwater discharges from urbanized areas consist mainly of surface runoff from residential, commercial, and industrial developments. In addition, there are stormwater discharges from agricultural land uses, including dairy operations. The constituents of concern and significance in these discharges are: total and fecal coliform, enterococcus, total suspended solids, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), oil and grease (O&G), heavy metals, nutrients, base/neutral and acid extractibles, pesticides, herbicides, and petroleum hydrocarbon components.

EXISTING FACILITIES AND PROGRAMS - CONT'D

Currently, the SBCFCD does not have an active surface water quality monitoring program in the permitted area. However, the SBCFCD collects precipitation data from 102 precipitation stations and streamflow data from 60 recording gages and eight alert gages. The County has 112 inactive precipitation stations; historic records for these inactive precipitation stations are available at the SBCFCD.

Recognizing the fact that stormwater discharges contain significant amounts of pollutants, the SBCFCD, the County of San Bernardino, the incorporated cities of San Bernardino County, and the Regional Board have all agreed that an areawide stormwater permit is the most effective way to develop and implement a comprehensive stormwater management program in a timely manner. This areawide stormwater permit contains requirements with time schedules that will allow the County of San Bernardino and the cities to address water quality problems caused by urban stormwater runoff by developing and implementing management programs to reduce pollutants in stormwater discharges to the maximum extent practicable.

PERMIT REQUIREMENTS

In accordance with Section 402(p)(3), as part of a program to reduce the pollutants in stormwater discharges to the maximum extent practicable, the dischargers are required to submit existing management plans and programs being implemented in the localities, and information that could lead to successful identification of illegal discharges and sources of pollutants in stormwater discharges. In addition, the dischargers will be required to adopt and implement effective management programs and control measures in accordance with a time schedule approved by the Executive Officer of the Regional Board. Due to the large number of water bodies covered in this order, it is necessary to prioritize water bodies for the development and implementation of the stormwater management program. The stormwater management program will be developed and implemented in three phases, Phases I, II, and III. In Phase I, the dischargers will be required to submit existing stormwater qualitative data and develop management and monitoring programs for those water bodies where beneficial uses are threatened or impaired due to runoff of stormwater and urban nuisance water. These water bodies include Reaches 4 and 5 of the Santa Ana River and its tributaries, Prado area streams (Chino Creek), San Gabriel Mountain Streams (Mountain and Valley Reaches), Baldwin Lake, and Big Bear Lake. In Phase II, the dischargers will be required to submit existing stormwater qualitative data and to develop stormwater management and monitoring programs for Reaches 1 and 2 of San Timoteo Creek and its tributaries. In Phase III,

PERMIT REQUIREMENTS - CONT'D

the dischargers will be required to submit existing stormwater qualitative data and develop management and monitoring programs for Reach 6 of the SAR, San Bernardino Mountain streams, and Jenks Lake.

If existing management programs are not effective in controlling pollutant loading and in achieving the water quality objectives of the receiving waters, additional programs shall be developed and implemented.

The permit also requires the development and implementation of management programs (best management practices) during the life of the permit such that the quality of stormwater discharged can be improved and the water quality objectives of the receiving waters can be met ultimately. It is also expected that the beneficial uses of the receiving waters will be protected through implementation of best management practices.

The proposed order also requires the dischargers to submit a stormwater system monitoring program that will meet the objectives outlined in Item VII.1., of the order.

BENEFICIAL USES

Stormwater flows which are discharged to storm drain systems in San Bernardino County are tributary to various water bodies (inland surface streams and lake and reservoirs) of the state. The beneficial uses of these water bodies include municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), industrial process supply (PROC), groundwater recharge (GWR), hydropower generation (POW), water contact recreation (REC-1), non-contact water recreation (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), wildlife habitat (WILD), and fish spawning (SPWN). The beneficial uses of individual water bodies are shown on Attachment "E". The ultimate goal of this stormwater management program is to protect the beneficial uses of the receiving waters.

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 the stormwater 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 stormwater discharges and receiving waters will be improved, thereby protecting the beneficial uses of waters of the United States. This discharge is consistent with the federal and state antidegradation requirements and a complete antidegradation analysis is not necessary.

PUBLIC WORKSHOP

The Regional Board recognizes the significance of San Bernardino County's Stormwater/Urban Runoff Management Program and will conduct at least one workshop every year during the term of this permit to discuss the progress of the stormwater management program. The details of the annual workshop will be 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 permit may register their name, mailing address and phone number with the Regional Board office at the address given below.

PUBLIC HEARING

The Regional Board will hold a public hearing regarding the proposed waste discharge requirements. The public hearing is scheduled to be held on Friday, October 19, 1990, at 9:00 a.m. at the City Council Chambers at 3300 Newport Boulevard, Newport Beach. Further information regarding the conduct and nature of the public hearing concerning these waste discharge requirements may be obtained by writing or visiting the Santa Ana Regional Board office, 6809 Indiana Avenue, Suite 200, Riverside.

WRITTEN COMMENTS

Interested persons are invited to submit written comments on the proposed waste discharge requirements and the Fact Sheet. Comments should be submitted by September 28, 1990, either in person or by mail to:

Joanne Lee
California Regional Water Quality Control Board
Santa Ana Region
6809 Indiana Avenue, Suite 200
Riverside, CA 92506-4298

INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Joanne Lee at (714)782-4130. 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 10:00 a.m. and 4:00 p.m., Monday through Thursday (excluding holidays).

REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group of applications may leave his name, 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.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS NPDES NO. CAS618036 ORDER NO. 96-32 FOR THE SAN BERNARDINO COUNTY TRANSPORTATION/FLOOD CONTROL DEPARTMENT, THE COUNTY OF SAN BERNARDINO, AND THE INCORPORATED CITIES OF SAN BERNARDINO COUNTY WITHIN THE SANTA ANA REGION AREAWIDE URBAN STORM WATER RUN-OFF

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. On April 4, 1995, the San Bernardino County Transportation/Flood Control Department (SBCFCD), in cooperation with the County of San Bernardino, and the incorporated cities of Big Bear Lake, Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa (hereinafter collectively referred to as "permittees") jointly submitted National Pollutant Discharge Elimination System (NPDES) Application No. CAS618036 to renew their areawide NPDES permit for urban storm water run-off.

2. The 1987 amendments to the Clean Water Act required the United States Environmental Protection Agency (EPA) to develop permitting regulations for storm water discharges from municipal separate storm sewer systems serving a population of 100,000 or more and for storm water discharges associated with industrial activities including construction sites. The EPA published proposed storm water regulations on December 7, 1988 and promulgated the final regulations on November 16, 1990. Prior to the EPA's promulgation of the final storm water regulations, the three counties (Orange, Riverside, and San Bernardino) and the incorporated cities within the jurisdiction of the Santa Ana Regional Board requested early areawide NPDES permits for urban storm water run-off.

3. On October 19, 1990, the Regional Board adopted Order No. 90-136 for urban storm water run-off from urban areas in San Bernardino County within the Santa Ana Region. Order No. 90-136 expires on October 1, 1995. The San Bernardino County Transportation/Flood Control Department was named as the principal permittee and San Bernardino County and the incorporated cities were named as

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the co-permittees. In order to more effectively carry out the requirements of this order, the permittees have agreed that the SBCFCD will continue as principal permittee and San Bernardino County and the incorporated cities will continue as co-permittees. However, the Regional Board, in exercising its enforcement discretion, will take action only against the individual permittee responsible for specific violations of this order, whenever possible.

4. San Bernardino County Municipal Permit required the permittees to develop and implement a Drainage Area Management Plan (DAMP), a receiving and storm water monitoring program, reconnaissance survey program, a plan for prosecution of illegal dischargers, and to establish legal authority to effectively prohibit illegal/illicit discharges. The overall goal of these requirements was to effectively reduce the pollutant loadings to surface waters from urban run-off to the maximum extent practicable (MEP).

5. The Report of Waste Discharge (the permit renewal application) included the following components:

   a. A Municipal Storm Water Management Program which is an extension of the October, 1993 Drainage Area Management Plan.
   b. Letters of intent for compliance with San Bernardino County Municipal Storm Water Permit by all the co-permittees.

6. Within the Santa Ana Region, the permittees serve a population of approximately 1.11 million, occupying an area of approximately 985 square miles. The latest figures obtained from the Reconnaissance Progress Report estimated 384 miles of above-ground and 334 miles of below-ground storm drain channels in the project area. Approximately seven percent (7%) of the San Bernardino County area drains into water bodies within this Regional Board's jurisdiction. The project area is shown on Attachment 1. This order regulates storm water run-off from areas under the jurisdiction of the permittees. The term storm water as used in this order includes storm water run-off, snow melt run-off, and surface run-off and drainage. The permittees have jurisdiction over and/or maintenance responsibility for storm water conveyance systems within San Bernardino County. Approximately 50% of the remaining San Bernardino County drainage areas is within the jurisdiction of the Lahonton Regional Board and the other 43% is within the jurisdiction of the Colorado River Basin Regional Board. However, urbanization in these areas is minimal compared to areas within the Santa Ana Regional Board's jurisdiction.

7. The Santa Ana River Basin is the major watershed within this Region. This watershed is divided into the upper and lower Santa Ana watersheds. The lower Santa Ana River Basin (downstream from Prado Dam) includes the Orange County

drainage areas and the Upper Santa Ana River Basin includes the San Bernardino County and the Riverside County drainage areas. The San Bernardino County drainage areas are generally upstream of the Riverside County drainage areas.

8. The three county areas within this Region are regulated under three areawide permits for urban storm water run-off. These areawide NPDES permits are:

   a. Orange County, NPDES No. CA 8000180, Order No. 90-71 (upon renewal Order No. 96-31, NPDES No. CAS618030)

   b. Riverside County, NPDES No. CA 8000192, Order No. 90-104 (upon renewal Order No. 96-30, NPDES No. CAS618033)

   c. San Bernardino County, NPDES No. CA 8000200, Order No. 90-136 (upon renewal Order No. 96-32, NPDES No. CAS618036)

9. Surface Water bodies in San Bernardino County within the jurisdiction of Santa Ana Region are listed in Attachment 2.

10. Run-off from the San Bernardino County drainage areas is generally conveyed to the Riverside County drainage 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.

11. The entities listed in Attachment 3 are considered as potential dischargers of storm water to the San Bernardino County drainage areas. It is expected that these entities will also work cooperatively with the permittees to manage urban run-off. The Regional Board has the discretion and authority to require non-cooperating entities to participate in this areawide permit or obtain individual storm water permits, pursuant to 40 CFR 122.26(a).

12. The 1989, 1991, and 1994 Water Quality Assessments by the Regional Board identified apparent impairment of a number of water bodies within the permitted area. The beneficial uses of these water bodies are thought to be threatened or impaired in part due to urban storm water run-off and non-storm water flows from urbanized areas. Preliminary results from urban storm water monitoring programs within the Region indicate that major pollutants of concern in urban run-off are certain heavy metals, sediment, coliform bacteria, pesticides, and nutrients. Municipal storm water run-off is a source of pollutants to waters of the U.S. that

may be causing or contributing to water quality impairment. It is recognized that instream or end-of-channel treatment of storm water is difficult and expensive. Therefore, it is critical to identify the sources and to develop management practices necessary to reduce pollutant loading to storm water. 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 point source discharges permitted by the Regional Board under individual permits.

13. Studies conducted by the EPA, the states, flood control districts and other entities indicate the following major sources for urban storm water pollution:

    a. Industrial sites where appropriate pollution control and best management practices (BMPs) are not implemented,

    b. Construction sites where erosion and siltation controls and BMPs are not implemented, and

    c. Urban run-off where the drainage area is not properly managed.

14. To address the industrial and construction sites, the State Board issued two statewide general NPDES permits: one for storm water run-off from industrial sites (NPDES No. CAS000001, General Industrial Activities Storm Water Permit) and the second one for storm water run-off from construction sites (NPDES No. CAS000002, General Construction Activity Storm Water Permit). In addition, the Regional Board adopted Order No. 94-005, NPDES NO. CA 8000279, for storm water run-off from facilities owned and/or operated by Caltrans, which includes freeways and highways, and Order No. 94-7, NPDES No. CA 8000336, for concentrated animal feeding operations, including dairies (General Dairy permit). The Regional Board has and continues to issue individual storm water permits for industrial facilities within the Region.

15. One of the major components of these statewide permits, the Caltrans permit, and the General Dairy Permit is the development and implementation of a storm water pollution prevention plan (SWPPP).

16. Most industrial activities (some light industrial activities are exempt) and construction activities on five acres or more are required to get individual NPDES permits for storm water discharges or get coverage under these statewide general permits.

17. The Regional Board is the enforcing authority for the two statewide general permits. However, in most cases, the industrial and construction sites discharge

directly into storm drains and/or flood control facilities owned and operated by the permittees. These industrial and construction sites are also regulated under local laws and regulations. Therefore, a coordinated effort between the permittees and the Regional Board staff is critical to avoid duplicative storm water regulatory activities. A memorandum of understanding between the permittees and the Regional Board may be appropriate to efficiently implement the storm water regulations for industries and construction sites at the local level.

18. The permittees or other agencies generally conduct inspections of most industrial and commercial facilities and construction sites within their jurisdiction to determine compliance with local storm water ordinances and regulations, as well as for other regulatory purposes. The permittees have agreed to notify Regional Board staff when conditions are observed during such inspections which result in threat or potential threat to water quality. This also includes failure to obtain coverage under the general storm water permits.

19. The permittees have agreed not to issue grading and/or building permits without proof of filing for a Notice of Intent (NOI) for sites subject to State's General Construction Activity Storm Water Permit.

20. The permittees own/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. As part of this order, the permittees will assess public agency activities and facilities for potential impact to storm water quality and develop and implement best management practices to reduce pollutant discharges from those activities that are found to be pollutant sources. Non-storm water discharges from these facilities and/or activities also affect water quality. This order prohibits non-storm water discharges from public facilities unless the discharges are exempt under Section III., Discharge Limitations, 5., of this order or are permitted by the Regional Board under an individual NPDES permit.

21. The major focus of storm water pollution prevention is the development and implementation of an appropriate drainage area management plan (DAMP) including best management practices (BMPs). The ultimate goal of the urban storm water management program is to attain water quality consistent with the

water quality objectives for the receiving waters in order to protect beneficial uses. The permittees developed and submitted a DAMP, which was approved on May 2, 1994. The Municipal Storm Water Management Program (MSWMP) is an extension of the DAMP.

22. The MSWMP provides a framework for continuing the implementation of DAMP elements for the term of the renewed permit.

23. There is some contribution of pollutants in urban run-off from privately owned and operated facilities such as residences, businesses and commercial establishments and public and private institutions. Therefore, a successful storm water management plan should include the participation and cooperation of the public, businesses, the permittees and the regulators. Therefore, the DAMP has a strong emphasis on public education.

24. The MSWMP included numerous BMPs under nine major program elements and a time schedule for implementation. These BMPs are organized into various components such as BMPs for existing residential, commercial and industrial areas; BMPs for construction sites; BMPs for new developments, etc. These components include regulatory activities, public education programs and operations and maintenance activities.

25. In order to characterize storm water discharges, to identify problem areas, and to determine the effectiveness of the various BMPs, an effective monitoring program is critical. San Bernardino County monitoring program commenced in January of 1994 which included storm water monitoring, receiving water monitoring, dry weather monitoring and sediment monitoring. The Report of Waste Discharge included a Consolidated Program for Water Quality Monitoring.

26. In addition to the Regional Board, a number of other stakeholders are involved in the management of these water resources which includes, but is not limited to, the incorporated cities in the Region, publicly owned treatment works, the three counties, Santa Ana Watershed Project Authority and its member agencies. The cooperation and coordination between all the stakeholder are critical for an efficient and most economical management of the watershed. The Regional Board will coordinate the activities within the watershed and seek participation of the permittees.

27. The permittees have agreed to revise the implementation agreement that was developed in 1990 as required under Order No. 90-136.

28. Illegal dumping and illicit/illegal connections and discharges to the storm drains are

contributors to storm water and other surface water contamination. Most of the cities have completed their reconnaissance survey of the municipal storm drain systems (open channels and underground storm drains) and the remaining cities have scheduled the completion prior to expiration of their municipal permit (October 1, 1995). The permittees were required to detect, identify and eliminate illicit/illegal discharges. Additionally, the permittees are also required to develop a program to prohibit any future illegal/illicit connections to their storm drains and flood control facilities.

29. As part of Order No. 90-136, the permittees were required to develop and implement a plan to eliminate the illicit connections and to prosecute the illegal dischargers. This order requires the permittees to continue the implementation and enforcement required under this plan.

30. This order requires the permittees to continue to implement the BMPs listed in the ROWD and to effectively prohibit illegal and illicit discharges to the storm drain system. One of the major elements of the DAMP was the establishment of legal authority. The permittees within San Bernardino County have already adopted ordinances to establish their legal authority. This task was completed as of April 1995.

31. Successful implementation of the provisions and limitations in this order will require the cooperation of all the involved agencies and organizations within San Bernardino County (e.g. Fire Department, Department of Environmental Health, Planning Department, Building and Safety, Code Enforcement, etc.). As such, these agencies and organizations are expected to actively participate in implementing this areawide storm water program. 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, in the California Environmental Quality Act (CEQA) review process for specific projects, Master Plans, etc.

32. The permittees may lack legal jurisdiction over storm water discharges into their systems from some of the State and federal facilities, agricultural land, utilities and special districts, and Native American tribal lands. The Regional Board recognizes that the permittees should not be held responsible for such facilities and/or discharges.

33. 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.

34. 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.

35. The requirements contained in this order are necessary to implement the Basin Plan.

36. In accordance with the Clean Water Act and it's implementing regulations, this order requires the permittees to develop and implement programs and policies necessary to control the discharge of pollutants to waters of the U.S. to the maximum extent practicable.

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 run-off solely through traditional end-of-pipe treatment. However, the U.S. EPA and State Water Resources Control Board have determined that the NPDES permits for urban storm water run-off must contain effluent limitations based on water quality standards (beneficial uses and water quality objectives). The development and implementation of best management practices (BMPs), which will achieve compliance with applicable standards, are generally considered to be acceptable as effluent limitations. In accordance with Section 402 (p) of the Clean Water Act, this order requires the permittees to develop controls to reduce the discharge of pollutants to the maximum extent practicable. If urban storm water discharges cause an exceedance of the water quality standards in the receiving waters, the BMPs will be reevaluated, revised, and implemented, as appropriate, to address any exceedance of receiving water quality standards. Numeric and narrative water quality objectives are contained in the Basin Plan for the water bodies in this Region. This order does not contain numeric effluent limitations for any constituents because the impact of the storm water discharges on the water quality of the receiving waters has not yet been fully determined. Extensive water quality monitoring and analysis of the data are essential to make that determination. Due to the high cost associated with monitoring, and due to the variability that exists in the current storm water monitoring efforts being conducted by the permittees and other municipal permittees in Orange and Riverside Counties under their municipal storm water permits, a tri-county monitoring program will be considered to develop and implement effective monitoring procedures and strategies.

38. It is the Regional Board's intent that this order shall achieve attainment and protection of the beneficial uses of receiving waters. This order therefore, includes Receiving Water Limitations required to implement water quality objectives and to prevent nuisance and water quality impairment in receiving waters. This order

requires implementation of control measures in accordance with the approved MSWMP that will reduce pollutants in storm water discharges to the maximum extent practicable. The Receiving Water Limitations require the implementation of control measures that are technically and economically feasible as necessary to protect beneficial uses and attain water quality objectives of the receiving waters.

The Regional Board finds that the unique aspects of the regulation of storm water discharges through municipal storm sewer systems, including intermittent discharges, difficulties in monitoring and limited physical control over the discharge, will require adequate time to implement and evaluate the effectiveness of best management practices and to determine whether they will adequately protect receiving waters. Therefore, the permit includes a procedure for determining whether storm water discharges are causing continuing or recurring exceedances of receiving water limitations and for evaluating whether the approved MSWMP must be revised. The permittees will be in compliance with the Receiving Water Limitations so long as the permittees comply with that procedure.

39. The storm water regulations require public participation in the storm water management program development and implementation. 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. In considering the public comments, the permittees may modify reports, plans, or schedules prior to submittal to the Regional Board.

40. 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.

41. 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 storm water discharges are consistent with the federal and state anti-degradation requirements and a complete anti-degradation analysis is not necessary.

42. 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.

43. 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 the regulations and guidelines adopted thereunder, shall comply with the following:

I. RESPONSIBILITIES OF THE PRINCIPAL PERMITTEE

The principal permittee shall be responsible for managing the overall storm water program and shall:

1. Conduct water quality and hydrographic monitoring of the municipal separate storm sewer system outfalls as agreed upon by the Executive Officer of the Regional Board.

2. Develop uniform criteria to inspect the municipal storm drain systems.

3. Develop minimum criteria for inspections at industrial facilities and construction sites, and reporting to the Regional Board of observed non-compliance discharges, as well as non-compliance with local ordinances at sites which fall under the general construction or industrial storm water permits.

4. Conduct inspections of the storm drain systems owned and operated by the SBCFCD.

5. Implement management programs, monitoring programs, and related plans as required by this order.

6. Prepare and submit to the Executive Officer of the Regional Board, unified reports, plans, and programs necessary to comply with this order.

7. Enact and revise policies and ordinances necessary to establish and maintain adequate legal authority within the scope of the San Bernardino County Transportation/Flood Control Department Act, as required by the Federal Storm Water Regulations.

8. Respond and/or arrange for responding to emergency situations such as accidental spills, leaks, illicit discharges/illegal connections, etc., to prevent or to reduce the discharge of pollutants to the municipal separate storm sewer systems and to waters of the U.S.

In addition, the activities of the principal permittee should, at a minimum, include the following:

9. Coordinate permit activities and participate in any subcommittees formed as necessary, to coordinate compliance activities with this order.

10. Provide technical and administrative support and inform the co-permittees of the progress of other pertinent municipal programs, pilot projects, research studies, etc.

11. Coordinate the implementation of areawide storm water quality management activities such as monitoring program, public education, pollution prevention, household hazardous waste collection, etc.

12. Gather and disseminate information on the progress of statewide municipal storm water programs and evaluate the information for potential use in the execution of this order.

13. Monitor the implementation of the plans and programs required by this order and determine their effectiveness in attaining water quality standards.

14. Coordinate activities pertaining to implementation of this order with the Regional Board.

15. Solicit and coordinate public input for any major proposed storm water management programs and implementation plans.

16. Develop and implement mechanisms, performance standards, etc., to promote consistent implementation of BMPs among the permittees.

17. In conjunction with the other permittees, implement the BMPs listed in the approved DAMP, as amended by the Report of Waste Discharge (ROWD).

18. Participate with other counties (Orange and Riverside counties) in the development and implementation of a tri-county monitoring program coordinated by the Regional Board.

II. RESPONSIBILITIES OF THE CO-PERMITTEES

The co-permittees shall be responsible for managing the storm water program within their jurisdiction and shall:

1. Enact and revise policies and ordinances necessary to establish and maintain adequate legal authority as stated in Section V(10) of this order and required by the Federal Storm Water Regulations.

2. Conduct storm drain system inspections in accordance with the uniform criteria developed by the principal permittee.

3. Submit to the principal permittee any information necessary to develop unified report submittal to the Executive Officer of the Regional Board.

4. In conjunction with the principal permittee, implement the BMPs listed in the approved DAMP, as amended by the ROWD.

Co-permittees activities should, at a minimum, include the following:

5. Administer the storm water and erosion control ordinances.

6. Conduct and coordinate with the principal permittee any surveys and characterizations needed to identify the pollutant sources and drainage areas.

7. Review and comment on all plans, strategies, management programs, monitoring programs, as developed by the principal permittee or any subcommittee to comply with this order.

8. Participate in committees or subcommittees formed to address storm water related issues to comply with this order.

III. DISCHARGE LIMITATIONS

1. The permittees shall prohibit illicit discharges from entering into the municipal separate storm sewer systems (municipal storm drain systems) and require controls to reduce the discharge of pollutants to the maximum extent practicable.
2. This order authorizes storm water discharges to waters of the U.S. from the permittees' existing municipal separate storm drain systems provided that the permittees implement the BMPs (structural and/or non-structural control measures) necessary to reduce the pollutants in the discharge to the maximum extent practicable. Discharges other than those listed under Item 5., below, and those for which the Regional Board has issued individual permits are prohibited.

3. The following discharges need not be prohibited by the permittees unless identified by the permittees as a source of pollutants to the receiving waters.

   a. Discharges for which an approval has been issued by the Regional Board office or State Board, including discharges authorized under NPDES permits issued by the State or Regional Boards,

   b. Discharges from potable water line flushing and other potable water sources,

   c. Discharges from fire fighting and fire hydrant testing and flushing,

   d. Discharges from landscape irrigation, lawn watering and other irrigation activities,

   e. Diverted stream flows,

   f. Rising ground waters and natural springs,

   g. Uncontaminated groundwater infiltration (as defined in 40 CFR 35.2005(20)) and uncontaminated pumped groundwater,

   h. Passive foundation drains,

   i. Air conditioning condensate,

   j. Water from crawl space pumps,

   k. Passive footing drains,

   l. Discharges from individual residential vehicle washing (not including discharges from mobile sources such as automobile/equipment detailing or washing),

   m. Flows from riparian habitats and wetlands,

   n. Dechlorinated swimming pool discharges,

   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.

For purposes of this order, a discharge may include storm water and other types of discharges as indicated above.

4. The permittees shall take necessary steps to ensure that non-storm water discharges to the municipal storm drain system do not cause or contribute to violations of water quality standards or degrade the waters of the U.S.

5. Non-storm water discharges from permittee's 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 Item 3., above. If permitting or immediate elimination of the non-storm water discharges is impractical, the permittees shall include in the storm water pollution prevention strategy, required under Section V. Provision 19., of this order, a proposed plan to address the non-storm water discharges.

6. The MSWMP, as outlined in the ROWD, is hereby made an enforceable component of this order.

IV. RECEIVING WATER LIMITATIONS

1. Receiving Water Limitations are based upon 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 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 1.a.

   a. If the Executive Officer determines that a continuing or recurring impairment of beneficial uses or exceedance of water quality objectives has been caused by urban storm water discharges from the municipal storm sewer system, the following steps shall be taken:

      i. The Executive Officer will evaluate the adequacy of permittees' implementation of the approved MSWMP based on the permittees' submitted reports and other relevant information. The Executive Officer will determine if implementation of the approved MSWMP has a reasonable

likelihood of preventing future continuing or recurring impairment of beneficial uses or exceedances of water quality objectives resulting from urban storm water discharges. If the Executive Officer makes this determination, the permittees are required to continue implementing the approved MSWMP.

ii. If the Executive Officer determines that implementation of the approved MSWMP will not have a reasonable likelihood of preventing future impairment of beneficial uses or exceedances of water quality objectives, the permittees shall, upon notice from the Executive Officer, do the following:

A. Submit a report that includes an evaluation of the relative contribution of the urban storm water discharges to the impairment of beneficial uses or the exceedance of water quality objectives. The report shall address the persistence, the significance, and to the extent feasible, the causes of the impairment or exceedance, and the technical and economic feasibility of control actions available to the permittees to reduce or eliminate the impairment or exceedance.

B. Submit a report reviewing the approved MSWMP to determine whether it should be revised so that there will be a reasonable likelihood of preventing future continuing or recurring beneficial use impairment or exceedances of water quality objectives, or whether revisions to achieve protection of beneficial uses or attainment of water quality objectives are technically or economically infeasible. If the report recommends revision of the approved MSWMP, the report shall include a work plan to revise the MSWMP so that it will have a reasonable likelihood of preventing future continuing or recurring beneficial use impairment or exceedances of water quality objectives. If the report concludes that no revisions are necessary to achieve protection of beneficial uses or attainment of water quality objectives, the report shall explain how implementation of the approved MSWMP will achieve compliance. If the report determines that revisions to achieve protection of beneficial uses or attainment of water quality objectives are technically or economically

infeasible, the permittees shall continue to comply with the approved MSWMP, shall fully document this determination, and shall make recommendations for actions to achieve compliance, including, for example, commencement of a total maximum daily load report or revision of the Basin Plan or mitigation projects to protect beneficial uses, and identification of possible funding sources for such actions.

C. The permittees shall implement the work plan and the revised MSWMP as approved by the Executive Officer.

2. The Executive Officer shall review and approve or disapprove the reports required under Receiving Water Limitation 1. The reports may be submitted as part of the next Annual Report, or at some other time designated by the Executive Officer. So long as the permittees have complied with the procedures set forth in the Receiving Water Limitation 1, they do not have to repeat the procedure for continuing or recurring exceedances of the same receiving water limitations. As appropriate, any determinations under this part or revisions to the approved MSWMP may be considered by the Regional Board in a public meeting."

V. PROVISIONS

GENERAL

1. Permittees shall demonstrate compliance with all the requirements in this order.

2. The Report of Waste Discharge, including the MSWMP, submitted as application for renewal of the NPDES permit is hereby made a part of this order.

3. Permittees shall implement all elements of the approved DAMP, as amended by the ROWD (MSWMP). Any proposed revisions to the MSWMP shall be submitted to the Executive Officer of the Regional Board or included in the Annual Report for review and approval. All revisions to the MSWMP, approved by the Executive Officer, shall be implemented in a timely manner.

4. The permittees shall comply with Monitoring and Reporting Program No. 96-32, which is hereby made a part of this order and any revisions thereto.

The Executive Officer is authorized to revise the Monitoring and Reporting Program and also to allow the permittees to participate in regional, statewide, national, or other monitoring programs in lieu of Monitoring and Reporting program for Order No. 96-32.

5. Upon approval by the Executive Officer of the Regional Board, all plans and reports required by this order, including any subsequent amendments, shall be implemented and shall become an enforceable part of this order.

6. The permittees shall report to the Executive Officer of the Regional Board:

   a. Any enforcement actions and discharges of storm or wastewaters, known to the permittees, which may have an impact on human health or the environment;

   b. Any industrial or construction facilities observed to potentially be not in compliance with the storm water regulations or where the activities may be contributing pollutants to the waters of the U.S.; and

   c. Any observed activities on federal, state, or other lands or facilities, where the permittees do not have any jurisdiction, and where the observed activities may be contributing pollutants to waters of the U.S.

7. The permittees shall not issue occupancy permits unless the applicant is informed of his obligation under the State's NPDES industrial general permits. The permittees shall not issue grading or building permits to developments on 5 acres or more unless the applicant shows proof of filing a Notice of Intent in accordance with the State's General Construction Activities Storm Water Permit. The proof of filing may include a letter from the Regional Board office, a copy of the Notice of Intent or other acceptable proof of coverage under the general permit. The permittees shall coordinate the activities of the various departments/sections within each permittee's jurisdiction to ensure consistent implementation of storm water program.

8. Permit application and special NPDES program requirements contained in 40 CFR 122.21(a), (b), (d)(2), (f), and (p); 122.41(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), and (l); and 112.42(c) are incorporated into this order by reference.

IMPLEMENTATION AGREEMENT

9. No later than June 1, 1996, the permittees shall submit to the Executive Officer of the Regional Board an updated copy of an implementation agreement with authorized signatures of each of the permittees. Any subsequent revisions to the implementation agreement shall be forwarded to the Executive Officer of the Regional Board within 30 days of approval by the permittees. At a minimum, the implementation agreement should include all the essential elements of the existing agreement and a mechanism for active participation of all permittees in the committees and subcommittees to ensure uniform co-operation and involvement of the permittees in the decision making process.

LEGAL AUTHORITY

10. The permittees adopted the Storm Water Run-off Management Ordinance. This task was completed as of April, 1995. The permittees shall establish a mechanism for periodic review and update of their ordinances to ensure compliance with the requirements of 40 CFR Section 122.26(d)(2)(i)(A-F).

ENFORCEMENT STRATEGY

11. Permittees have developed an enforcement strategy as outlined in the ROWD (submitted on April 4, 1995) to enforce storm water and erosion control ordinances. The permittees shall implement the enforcement strategy which includes a mechanism for the inspection of industrial facilities and construction sites, notification to the Executive Officer of any observations of non-compliance with the storm water regulations and any proposed local enforcement action.

12. The enforcement strategy shall include enforcement and control of discharges from facilities not covered under the State's existing General Storm Water Permits.

13. Permittees have completed the reconnaissance survey of their storm drain conveyance systems as of October 1, 1995 and will eliminate all illegal and/or illicit connections by December 1, 1996. Permittees shall submit a report of the findings by April 30, 1997 and each year thereafter (including the detection, elimination and prosecution of illegal dischargers).

PUBLIC EDUCATION AND OUTREACH

14. The permittees shall continue to implement the public education efforts already underway and shall implement all of the proposed efforts contained in the Report of Waste Discharge. Any proposed changes shall be submitted to the Executive Officer of the Regional Board for approval.

15. When feasible, the permittees shall participate in joint outreach with other programs including, but not limited to, other municipal storm water programs to ensure that a consistent message on storm water pollution prevention is brought to the public.

16. The permittees shall develop public education materials to encourage the public to report illegal dumping from residential, industrial, construction and commercial sites into public streets, storm drains and other water bodies.

17. The permittees shall develop a public education program geared toward the industrial facilities and construction sites through active participation of the county and city departments.

18. Permittees shall develop an educational program targeted toward educating the staff at the county and city departments/agencies under their jurisdiction about storm water program and utilize their assistance in enforcing the requirements of this order. Example of these departments/agencies include Fire Department, Department of Health and Safety, Pre-treatment Programs, Hazardous Waste Collection, Building and Safety, etc.

MUNICIPAL FACILITIES

19. The permittees have developed a pollution prevention strategy to address their public agency facilities and activities not currently required to obtain coverage under the State's general storm water permits. The pollution prevention strategy is 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 are not sources of pollutants into the waters of the U.S. The pollution prevention strategy shall be implemented in accordance with the time schedule proposed in the ROWD.

MUNICIPAL CONSTRUCTION PROJECTS/ACTIVITIES

20. This order authorizes the discharge of storm water run-off 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.

21. 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 activities, the Executive Officer shall be notified of the completion of the construction project.

22. The permittees shall develop and implement a storm water pollution prevention plan and a monitoring program that is specific for the construction project prior to the commencement of any of the construction activities. The SWPPP and the monitoring program shall be implemented throughout the duration of the construction activities on site. The SWPPP shall be kept at the construction site and released to the public and/or Regional Board Staff upon request.

23. The SWPPP and the monitoring program for the construction projects shall be consistent with the requirements of the most recent version of the State's General Permit for Storm Water Discharges Associated with Construction Activities.

24. The permittees shall give advance notice to the Executive Officer of the Regional Board of any planned changes in the construction activities which may result in non-compliance with the current version of the State's General Permit for Storm Water Discharges Associated with Construction Activities.

NEW DEVELOPMENTS (INCLUDING RE-DEVELOPMENT)

25. The permittees shall begin implementation of the new development BMPs as described in Section 4 of the ROWD in accordance with the schedule provided in the ROWD.

26. By April 30, 1997, the permittees shall update their General Plan and CEQA document preparation processes to ensure that storm water-related issues are properly considered. If necessary, these processes shall be revised to include requirements for evaluation of storm water-related impacts and identification of appropriate mitigation measures.

27. The permittees shall establish a mechanism to ensure proper maintenance and operation of all permanent flood control structures. For new developments, the parties responsible for the maintenance of the flood control structures and funding sources for maintenance and operation of the facilities shall be identified prior to issuance of grading permits.

FISCAL RESOURCES

28. The permittees shall prepare and submit a unified fiscal analyses report to the Executive Officer of the Regional Board. The fiscal analysis report shall be submitted no later than August 31 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.

PERMIT EXPIRATION AND RENEWAL

29. This order expires on March 1, 2001 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 Municipal Storm Water Management Program 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 map updates; and

    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.

30. 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 and policies 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; or

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.

31. 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.

32. Order No. 90-136 is hereby rescinded.

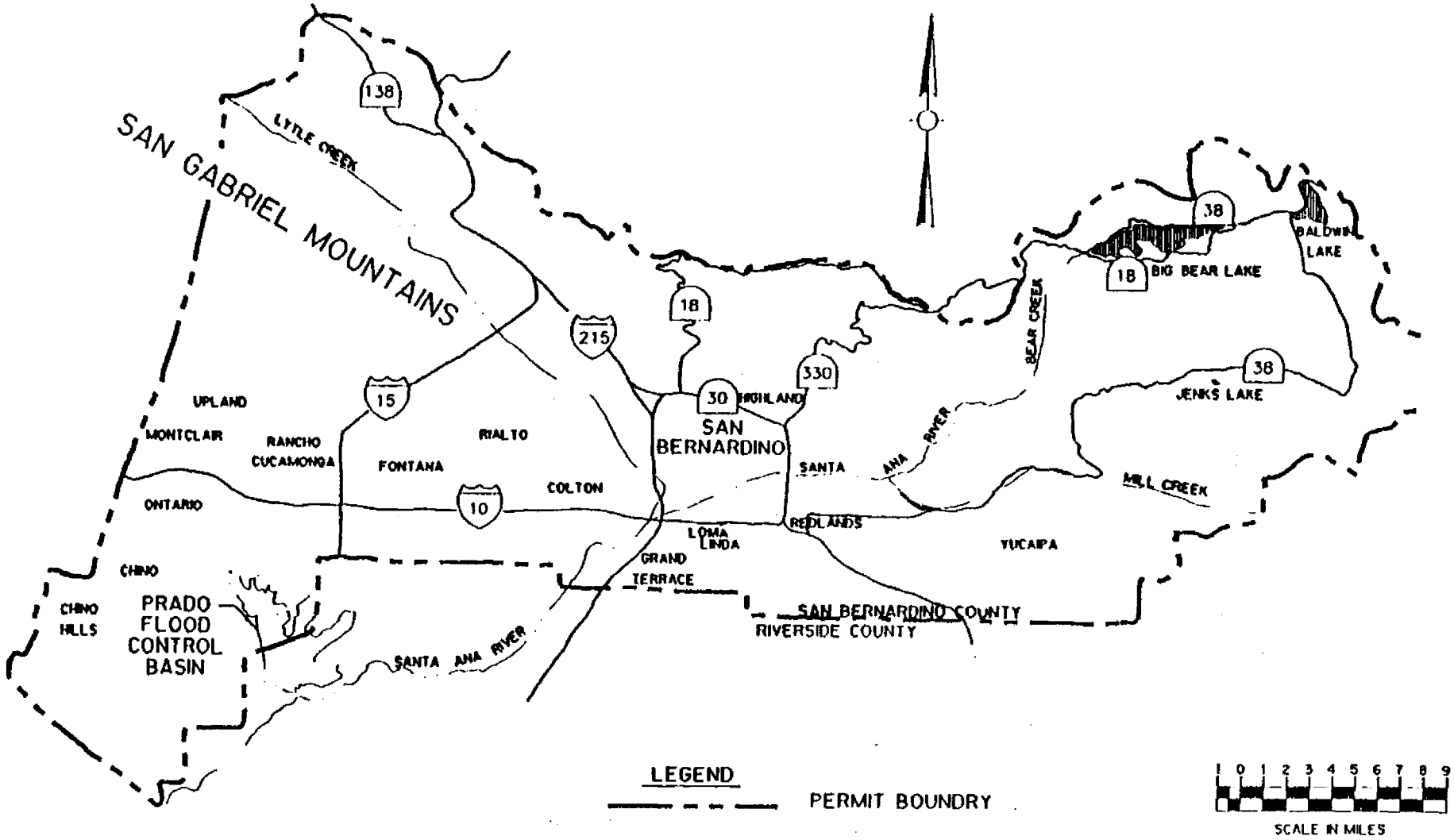
I, Gerard Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on March 8, 1996.

Gerard J. Thibeault
Executive Officer

RBSA_37024

Attachment 1

PROJECT AREA



Attachment 2

Inland Surface Streams

A. Santa Ana River
Santa Ana River, Reaches 4, 5, and 6

B. San Bernardino Mountain Streams

Mill Creek Drainage

Mill Creek, Reaches 1 and 2
Mountain Home Creek
Mountain Home Creek, East Fork
Monkey Face Creek
Alger Creek
Falls Creek
Vivian Creek
High Creek
Other Tributaries: Lost, Oak Cove, Green, Skinner, Momyer and Glen Martin Creeks, and other Tributaries to these Creeks

Bear Creek Drainage
Bear Creek
Siberia Creek
Slide Creek
All Other Tributaries to these Creeks

Big Bear Lake Tributaries
North Creek
Metcalf Creek
Grout Creek
Rathbone (Rathbun) Creek
Other Tributaries to Big Bear Lake: Johnson, Minnelusa, Polique, and Red Ant Creeks, and other Tributaries to these Creeks

Baldwin Lake Drainage
Shay Creek
Other Tributaries to Baldwin Lake: Sawmill, Green, and Caribou Canyons and other Tributaries to these Creeks.

C. Other Streams Draining to Santa Ana River (Mountain Reaches)
Cajon Creek
City Creek
Devil Canyon Creek
East Twin and Strawberry Creeks
Waterman Canyon Creek
Fish Creek
Forsee Creek
Plunge Creek
Barton Creek
Bailey Canyon Creek
Kimbark Canyon, East Fork Kimbark Canyon, Ames Canyon and West Fork Cable Canyon Creeks
Valley Reaches of Above Streams
Other Tributaries (Mountain Reach): Alder, Badger Canyon, Bledsoe Gulch, Borea Canyon, Breakneck, Cable Canyon, Cienega Seca, Cold, Converse, Coon, Crystal, Deer, Elder, Fredalba, Frog, Government, Hamilton, Heart Bar, Hemlock, Keller, Kilpecker, Little Mill, Little Sand Canyon, Lost, Meyer Canyon, Mile, Monroe Canyon, Oak, Rattlesnake, Round Cienega, Sand, Schneider, Staircase, Warm Springs Canyon and Wild Horse Creeks, and other tributary to these Creeks.

D. San Gabriel Mountain Streams (Mountain Reaches)
San Antonio Creek
Lytle Creek (South, Middle, and North Forks) and Coldwater Canyon Creek
Day and East Etiwanda Creeks
Valley Reaches of Above Streams
Cucamonga Creek (Mountain Reach)
Cucamonga Creek (Valley Reach)
Other Tributaries (Mountain Reaches): San Sevaine, Deer, Duncan Canyon, Henderson Canyon, Stoddard Canyon, Icehouse Canyon, Cascade Canyon, Cedar, Falling Rock, Kerkhoff and Cherry Creeks, and other Tributaries to these Creeks.

E. San Timoteo Area Streams
San Timoteo Creek, Reaches 1 and 2
Oak Glen, Potato Canyon and Birch Creeks
Yucaipa Creek

F. Prado Area Streams
Chino Creek

G. Lake and Reservoirs
Baldwin Lake
Big Bear Lake
Jenks Lake

Attachment 3

LIST OF OTHER ENTITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS TO THE SAN BERNARDINO COUNTY STORM WATER CONVEYANCE SYSTEM

Government Agencies

U.S. Army Corps of Engineers
U.S. Department of Agriculture - Forest Services, San Bernardino County National Forest
California Department of Transportation (Cal Trans)
California Department of Parks and Recreation - Chino Hills State Park
Inland Valley Development Agency, San Bernardino International Trade Center And Airport

Hospitals

Bear Valley Community Hospital
Chino Community Hospital
Doctors Hospital
Kaiser Foundation Hospital
Loma Linda Community Hospital
Loma Linda University Medical Center
Mountains Community Hospital
Ontario Community Hospital
Patton State Hospital
U.S. Department of Veterans Affair - Jerry L. Pettis Memorial Veterans Medical Center
Redlands Community Hospital
St. Bernardine Medical Center
San Antonio Community Hospital
San Bernardino Community Hospital
San Bernardino County Hospital

Railroads

AT&SF Railway Company
Southern Pacific Railroad Company

School Districts

Alta Loma Elementary School District
Bear Valley Unified School District
Central Elementary School District
Chaffey Joint Union High School District
Chino Unified School District

Colton Joint Unified School District
Cucamonga Elementary School District
Etiwanda Elementary School District
Fontana Unified School District
Mountain View Elementary School District
Mt. Baldy joint Elementary School District
Ontario-Montclair Elementary School District
Rialto Unified School District
Rim of the World Unified School District
Redlands Unified School District
San Bernardino City Unified School District
Upland Unified School District
Yucaipa Joint Unified School District

Universities and Colleges

California State University - California State University San Bernardino
San Bernardino Community College District - Chaffey College Campus
San Bernardino Community College District - Crafton Hills College Campus
San Bernardino Community College District - San Bernardino Valley College Campus
University of Redlands
Loma Linda University

Water Districts

Big Bear Municipal Water District
Chino Basin Municipal Water District
Cucamonga County Water District
East Valley Water District
Monte Vista Water District
San Bernardino Valley Municipal Water District
West San Bernardino County Water District
Yucaipa Valley Water District

Transportation

Omnitrans
Metrolink (Fontana, Montclair, Ontario, Rancho Cucamonga, Rialto, San Bernardino)
Redlands Municipal Airport
Rialto Municipal Airport
Chino Airport
Cable Airport

Other Potential Dischargers

United States Postal Service
California National Guard

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

MONITORING AND REPORTING PROGRAM NO. 96-32
NPDES NO. CAS618036
FOR
THE SAN BERNARDINO COUNTY TRANSPORTATION/FLOOD CONTROL DEPARTMENT, THE COUNTY OF SAN BERNARDINO, AND THE INCORPORATED CITIES OF SAN BERNARDINO COUNTY WITHIN THE SANTA ANA REGION
AREAWIDE URBAN STORM WATER RUN-OFF

I. GENERAL

1. Revisions of the monitoring and reporting program may be necessary to ensure that the discharger is in compliance with requirements and provisions contained in this order. Revisions may be made by the Executive Officer at any time during the term of this order, 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. All sample collection, handling, storage, and analyses shall be in accordance with 40 CFR Part 136.

3. The permittees are authorized to complement monitoring data from other sources provided those sources are identical to sources in the Santa Ana Watershed.

4. The permittees shall implement the Consolidated Program for Water Quality Monitoring (submitted as part of the Report of Waste Discharge) until development and implementation of an acceptable watershed monitoring program.

II. OBJECTIVES

The overall goal of this monitoring program is to develop and support an effective watershed management program. The following are the major objectives:

1. To define water quality status, trends, and pollutants of concern.

2. To characterize pollutants and to assess the influence of land use on water quality.

3. To identify significant water quality problems related to storm water discharges within the watershed.

4. To identify other sources of pollutants in storm water run-off to the extent possible (e.g., atmospheric deposition, contaminated sediments, other nonpoint sources, etc.).

5. To verify and to control illicit discharges.

6. To identify those waters which without additional action to control pollution from storm water discharges cannot reasonably be expected to attain or maintain applicable water quality standards or the goals and requirements of the Basin Plan.

7. To evaluate the effectiveness of existing management programs, including an estimate of pollutant reductions achieved by the structural and nonstructural BMPs.

8. To evaluate costs and benefits to the stakeholder 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 determine adequate progress toward meeting each objective.

III. MONITORING PROGRAM REQUIREMENTS

The permittees shall develop and submit for approval of the Executive Officer an integrated monitoring program geared towards achieving the above stated objectives. In developing this program, the principal permittee is encouraged to seek cooperation with the permittees from the Riverside and Orange counties. The Executive Officer or his/her designated representative(s) shall facilitate the coordination meetings or subcommittees formed to achieve this goal. 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:

1. Uniform guidelines for quality control, quality assurance, data collection and data analyses.

2. A mechanism for the collection, analyses and interpretation of existing data from Orange, Riverside, and San Bernardino County monitoring programs. These and other data from local, regional or national sources should 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.

3. A description of the monitoring program including:

    a. The number of monitoring stations;
    b. Environmental indicators (e. g., ecosystem, biological, habitat, chemical, sediment, stream health, etc.) chosen for monitoring;
    c. Parameters selected for field screening and for laboratory work; and

d. Total number of samples to be collected from each station, receiving water and major outfall monitoring, frequency of sampling during wet and dry weather, short duration or long duration storm events, type of samples (grab, 24-hour composite, etc.), and the type of sampling equipment.

4. A mechanism for analyzing the collected data and interpreting the results including an evaluation of the effectiveness of the management practices, and need for any refinement of the management practices.

5. A description of the responsibilities of all the participants in this program including estimated cost.

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 U.S. EPA, Region 9, no later than November 30, of each year. This progress report may be submitted in a mutually agreed upon electronic format. At a minimum, the 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 MSWMP. The effectiveness may be measured in terms of how successful the program has been in eliminating illicit/illegal discharges and in 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. An analysis and discussion on the monitoring results and any impacts on the receiving waters. Also, recommendations for corrective actions during the upcoming year of MSWMP implementation and monitoring.

e. An analysis and the effectiveness of the overall storm water management program. The permittees identification of proposed programs which will result in the attainment of the water quality standards, and a time schedule to implement the new programs.

f. An assessment of the public education program (including industrial facilities and construction sites) and educational activities proposed for the upcoming year.

g. A progress report on the prosecution of illegal dischargers and reduction or elimination of illegal discharges.

3. Permittees shall be responsible for the submittal of all required information/materials needed to comply with this order in a timely manner to the principal permittee. All such submittal shall be signed by a duly authorized representative of the permittee under penalty of perjury.

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	***DUE DATE***
Revised Implementation Agreement	June 1, 1996
Municipal Activities Pollution Prevention Strategy	December 1, 1996
Report on illegal/illicit connections	April 30, 1997
Fiscal Analyses Report	August 31 of each year
Report on Illicit/Illegal Discharges	April 30 of each year
Annual Report	November 30 of each year

Ordered by _____

Gerard J. Thibeault
Executive Officer

March 8, 1996

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SANTA ANA REGION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

AND

WASTE DISCHARGE REQUIREMENTS

NPDES NO. CAS618036

ORDER NO. R8-2002-0012

FOR

THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT, THE COUNTY OF SAN BERNARDINO, AND THE INCORPORATED CITIES OF SAN BERNARDINO COUNTY WITHIN THE SANTA ANA REGION

AREA-WIDE URBAN STORM WATER RUNOFF

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) that establishes 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 (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) published Phase I regulations (40 CFR Parts 122, 123 and 124), which describe permit application requirements for storm water discharges.

2. Prior to EPA's promulgation of the Phase I storm water 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 October 19, 1990, the Regional Board adopted Order No. 90-136 for urban storm water runoff from urban areas in San Bernardino County within the Santa Ana Region. The San Bernardino County Flood Control District was named as the principal permittee and San Bernardino County and the incorporated cities were named as the co-permittees. Order No 96-32, issued by the Regional Board on March 8, 1996, renewed the permit for another five years.

3. Order No. 96-32 expired on March 1, 2001. On September 1, 2000, the San Bernardino County Flood Control District (SBCFCD), in cooperation with the County of San Bernardino, and the incorporated cities of Big Bear Lake, Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa (hereinafter collectively referred to as "permittees" or dischargers) jointly submitted NPDES Application No. CAS618036 and a Report of Waste Discharge for reissuance of their area-wide storm water permit for urban storm water runoff. The Report of Waste Discharge was submitted in accordance with Section V.29

of the previous NPDES permit (Order No. 96-32) as application for permit renewal. In order to more effectively carry out the requirements of this Order, the permittees agreed that the San Bernardino County Flood Control District (SBCFCD) would continue as the principal permittee and San Bernardino County and the incorporated cities would be co-permittees. On March 2, 2001, Order No. 96-32, NPDES No. CAS618036, 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.

4. Within the Santa Ana Region, the permittees serve a population of approximately 1.33 million, occupying an area of approximately 985 square miles. The latest figures obtained from the Reconnaissance Progress Report estimated 384 miles of above-ground and 334 miles of below-ground storm drain channels in the project area. Approximately seven percent (7%) of the San Bernardino County area drains into water bodies within this Regional Board's jurisdiction. The project area is shown on Attachment 1. Approximately 50% of the remaining San Bernardino County drainage areas are within the jurisdiction of the Lahontan Regional Board and the other 43% is within the jurisdiction of the Colorado River Basin Regional Board. However, urbanization in those areas is minimal compared to areas within the Santa Ana Regional Board's jurisdiction.

5. Runoff from the San Bernardino County drainage areas is generally conveyed to the Riverside County drainage 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 may be discharged to the Pacific Ocean through Reach 1 of the Santa Ana River.

6. The Santa Ana River Basin is the major watershed within this Region. This watershed is divided into the lower Santa Ana River, middle Santa Ana River, Chino basin, upper Santa Ana and Big Bear Lake watersheds. The lower Santa Ana River Basin (downstream from Prado Dam) includes the Orange County drainage areas, and the rest of the Santa Ana River Basin includes the San Bernardino County and the Riverside County drainage areas. The San Bernardino County drainage areas are generally upstream of the Riverside County drainage areas. Some of the main surface water bodies in San Bernardino County within areas regulated under this Order include:

   a. Santa Ana River, Reaches 4, 5, and 6,

   b. Cucamonga Creek,

   c. San Sevaine Channel,

   d. Lytle Creek,

   e. San Timoteo Creek,

   f. Bear Creek,

g. Mill Creek (in San Bernardino area).

Surface water bodies in San Bernardino County within the jurisdiction of Santa Ana Region are listed in Attachment 2.

7. The beneficial uses of these water bodies include municipal and domestic supply, agricultural supply, industrial service supply, groundwater recharge, hydropower generation, water contact recreation, non-contact water recreation, and sportfishing, warm freshwater habitat, cold freshwater habitat, preservation of biological habitats of special significance, wildlife habitat and preservation of rare, threatened or endangered species. The ultimate goal of this storm water management program is to protect the beneficial uses of the receiving waters.

8. The three county areas within this Region are regulated under three area-wide permits for urban storm water runoff. These area-wide 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, coordination among the regulators, the municipal permittees, the public, and other entities is 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 the second one for storm water runoff from construction sites (NPDES No. CAS000002, General Construction Activity Storm Water Permit). Industrial activities (as identified in 40 CFR 122.26(b)(14) and construction sites on 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

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[1] Best Management Practices (BMPs) are water quality management practices that are maximized in efficiency for the control of storm water runoff pollution.

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 owned and/or operated by Caltrans (including freeways and highways). 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 in the Region; 10 of these facilities are located in the San Bernardino County area. Additionally, for a number of facilities that discharge process wastewater and storm water, storm water discharge requirements are included with their 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. Furthermore, the permittees authorize and permit developments within their jurisdiction, and they own, operate, and control the MS4 systems. The permittees approve residential, commercial, and industrial developments, and cause urbanization of the area and also benefit from it. Therefore, they have a responsibility to address any water quality problems resulting from this urbanization. The Regional Board administers compliance with the State's General Industrial Activities Storm Water Permit and the General Construction Activity Storm Water Permit. 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 during their routine activities, they observe conditions that pose a threat or potential threat to water quality, or an industrial facility or construction activity that has failed to obtain coverage under the appropriate general storm water permit.

12. This Order regulates urban storm water runoff[2] from areas under the jurisdiction of the permittees. The term storm water as used in this Order includes storm water runoff, snowmelt runoff, and surface runoff and drainage. The permittees have jurisdiction over and/or maintenance responsibility for storm water conveyance systems within San Bernardino County. The permittees may lack legal jurisdiction over storm water discharges into their systems from some of the 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

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[2] 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.

recognizes that the permittees should not be held responsible for such facilities and/or discharges.

13. 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. This Order is intended to regulate the discharge of pollutants in urban storm water runoff from anthropogenic (generated from human activities) sources and is not intended to address background or naturally occurring pollutants or flows.

14. A major portion of San Bernardino County within the Santa Ana Regional Board jurisdiction is being 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 may cause scour, erosion (sheet, rill and/or gully), aggradation (raising of a streambed from sediment deposition), changes in fluvial geomorphology, hydrology, and changes in aquatic ecosystem. The local agencies (the permittees) are the owners and operators of the MS4 systems and have authority to control discharges to these systems. The permittees have established appropriate legal authority to control discharges into their respective MS4 systems. They adopted grading and/or erosion control ordinances, guidelines and best management practices (BMPs) for municipal, commercial, and industrial activities. The permittees must exercise a combination of these programs, policies, and legal authority to minimize pollutant loads resulting from urbanization.

15. If not properly controlled and managed, urbanization could result in the discharge of pollutants into storm water runoff. Urban area runoff (Finding 9.c.) may contain elevated levels of pathogens (bacteria, protozoa, viruses), sediment, trash, fertilizers (nutrients, nitrogen and phosphorus compounds), 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).

16. These pollutants can then 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. On a nationwide basis, microbial contamination of the beaches from urban runoff and other sources has resulted in beach closures and health advisories. 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, and industrial wastes) can cause acute and/or chronic toxicity, and can bioaccumulate in aquatic resources (sediments and biota) to levels, which are harmful to human health. Nutrients (from fertilizers, confined animal facilities, 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.

17. The water quality assessment conducted by Regional Board staff has identified a number of other beneficial use impairments from 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 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 San Bernardino County area, these include: (1) Big Bear Lake (listed for copper, mercury, metals, noxious aquatic plants, nutrients and sedimentation/siltation); (2) Summit Creek (listed for nutrients); (3) Knickerbocker Creek (listed for metals and pathogens); (4) Grout Creek (listed for metals and nutrients); (5) Rathbone Creek (listed for nutrients, sedimentation/siltation); (6) Mountain Home Creek (listed for pathogens); (7) Mill Creek, Reaches 1 and 2, (listed for pathogens); (8) Santa Ana River, Reach 4 (listed for pathogens); (9) Lytle Creek (listed for pathogens); (10) Chino Creek, Reaches 1 and 2 (listed for high coliform count); (11) Cucamonga Creek, Valley reach (listed for high coliform count); (12) Mill Creek (Prado Area) (listed for nutrients); and, (13) Prado Park Lake (listed for nutrients and pathogens). For some of these impaired waterbodies, the cause of impairment is listed as urban runoff.

18. 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 are being developed for sediment, pathogens, and nutrients and other pollutants for impaired water bodies in San Bernardino County. Dischargers to these water bodies are currently cooperating in the

development of these TMDLs.

19. The MS4s generally contain non-storm water flows such as irrigation runoff, residential 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 separate NPDES permit; or are exempt as indicated in Discharge Prohibition, Section III, Item 3 of this Order.

20. Order No. 90-136 (first term permit) required the permittees to develop and implement a drainage area management plan (DAMP) and a storm water and receiving water monitoring plan, to eliminate illegal and illicit discharges to the MS4s and to enact the necessary legal authority to effectively prohibit such discharges. The overall goal of these requirements was to reduce pollutant loading to surface waters from urban runoff to the maximum extent practicable (MEP)[3]. Order No. 96-32 (second term permit) required continued implementation of the DAMP and the monitoring plan, and required the permittees to focus on those areas which threaten the beneficial uses.

21. This Order (Order No. R8-2002-0012, 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 that the permittees conduct, approve, regulate and/or authorize by issuing a license or permit.

22. The Report of Waste Discharge (ROWD) submitted for the third term permit included the following major elements:

    a. Summary of accomplishments and water quality monitoring results during the second term permit;

    b. Proposed Municipal Storm Water Management Program (MSWMP) for the third term. (The MSWMP, included in the ROWD for the third term permit, replaces the DAMP from the first term permit);

    c. Performance commitments for Proposed Program Elements;

    d. Guidelines for New Development and Redevelopment; and

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[3] Maximum Extent Practicable (MEP) means the standard for implementation of storm water management to reduce pollutants in storm water. CWA section 402(p)(3)(B)(iii) requires that municipal 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. Specifically, municipalities must choose effective BMPs, and reject applicable BMPs only where other effective BMPs will serve the same purpose..

e. A revised Water Quality Monitoring Plan.

23. 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 an environmental performance report for appropriate 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, 4 & 6 of this Order or are permitted by the Regional Board under an individual NPDES permit. The second term permit required the permittees to develop and implement a model Municipal Activities Pollution Prevention Strategy (MAPPS), including sewage spill response, maintenance practices at parks and recreation facilities, street sweeping and public agency employee training.

24. Successful implementation of the provisions and limitations in this Order will require the cooperation of other entities and all the public agency organizations within San Bernardino County (e.g., Fire Department, Building and Safety, Code Enforcement, Planning, etc.) having programs/activities that have an impact on storm water quality. Some of these organizations are not regulated under this Order. (A list of these organizations is included in Attachment 3.) As such, these organizations are expected to actively participate in implementing the San Bernardino County NPDES Storm Water Program. 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. If any entity such as those listed in Attachment 3 is determined to cause or contribute to violations of this Order, the Regional Board has the discretion and authority to require the non-cooperating entity to participate in this areawide permit or obtain individual storm water discharge permits, pursuant to 40 CFR 122.26(a). The permittees have developed an Implementation Agreement among the SBCFCD, the County and the cities. The Implementation Agreement establishes the responsibilities of each party and a funding mechanism for the shared costs, and recognizes the Management Committee.

25. The major focus of storm water pollution prevention is the development and implementation of appropriate MSWMP including best management practices (BMPs). The ultimate goal of the urban storm water management program is to

support attainment of water quality consistent with the water quality objectives for the receiving waters in order to protect beneficial uses through the implementation of the MSWMP.

26. The MSWMP is a dynamic document and the permittees have implemented, or are in the process of implementing, the various elements of the MSWMP. During the second permit term, the DAMP for the San Bernardino County areawide permit was replaced by the MSWMP contained in the ROWD submitted in 1995. This Order requires the permittees to continue to implement the BMPs listed in the ROWD (2000) and the MSMWP; update or modify the MSWMP, when appropriate, consistent with the MEP and other applicable standards; and to effectively prohibit illegal and illicit discharges to the storm drain system.

27. 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 ROWD (2000) has a strong emphasis on public education.

28. The San Bernardino County ROWD (2000) defined: (1) a management structure to facilitate permittees' compliance efforts; (2) a formal agreement to underpin cooperation; and (3) detailed municipal efforts 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. The ROWD (2000) also defined a surface water quality monitoring program.

29. 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 includes storm drain outfall monitoring, receiving water monitoring, and dry weather monitoring. The monitoring data from the last decade identified elevated pollutant levels at monitoring stations 2, 3, and 5. Drainage at Station 2 is influenced by mixed commercial and industrial land uses. Station 3 is characterized by mixed land uses including agricultural. Station 5 is influenced by commercial and light industrial land uses. These areas could be targeted for special pollutant source identification and control programs. The monitoring data indicated some spatial differences in water quality between San Bernardino County's major watersheds.

30. The Strategic Plan and Initiatives (June 22, 1995) and the 2001 Draft Strategic Plan for the State Water Resources Control Board and the Regional Water Quality Control Boards recognize 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 programs and TMDL processes. Further, the State Board is required by SB 72 (Water Code Section 13383.5) to develop a statewide municipal storm water monitoring program. Consistent with this approach, some of the municipal storm water monitoring programs have already been integrated into regional monitoring programs. This Order requires the permittees to develop an integrated watershed monitoring program by July 1, 2003.

31. Illegal discharges[4] to the storm drains could 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 illicit connections to their storm drains and flood control facilities. Continued surveillance and enforcement of these programs are required to eliminate illicit connections and illegal discharges. The permittees have a number of mechanisms in place to eliminate illegal discharges to the MS4s, including industrial facility inspections, drainage facility inspections, water quality monitoring programs, and public education. The permittees also developed a summary format for illegal discharge reporting. During the second term permit, the permittees completed a reconnaissance survey of the MS4s to detect and eliminate any illicit connections (undocumented or unpermitted connections to the MS4s). The permittees have trained their staff on illegal discharge surveillance/cleanup procedures. The permittees will continue to monitor for any new illicit connections and will concentrate on preventing/cleanup of illegal discharges.

32. The permittees have the authority to control pollutants in storm water discharges, to prohibit illegal discharges/illicit connections, to control spills, and to require compliance and carry out inspections of the storm drain systems within their respective jurisdictions. The permittees have various forms of legal authority in place, such as charters, State Code provisions for General Law cities, the San Bernardino County Flood Control Ordinance, San Bernardino County Water Pollution Ordinance, various county ordinances which address industrial wastes and waste discharges within the unincorporated areas, city ordinances, and applicable portions of municipal codes and the State Water Code, to regulate storm water/urban runoff discharges.

33. In order to promote countywide consistency and to provide a legal underpinning to the entire San Bernardino County Storm Water Program, a model Storm Drain Ordinance was completed in the first permit term and was adopted by all the permittees. The permittees are required to evaluate the effectiveness of their

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[4] 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.

existing enforcement authority to determine the need for enhancement of their legal authority to administer civil and/or criminal penalties for violations of Storm Drain 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. During the second permit term, the permittees have completed the review and made the necessary revisions to consider storm water quality 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 County of San Bernardino already requires a Water Quality Management Plan, which addresses permanent post-construction BMPs, in addition to the SWPPP 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. Successful implementation of the provisions and limitations in this Order will require the cooperation of all the public agency organizations within San Bernardino County having programs/activities that have an impact on storm water quality (e.g. Fire Department, Building and Safety, Code enforcement, etc.). As such, these organizations are expected to actively participate in implementing this areawide storm water program.

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 minimize the discharge of pollutants in urban runoff to waters of the U. S. to the maximum extent practicable.

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 requires 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 based on 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 ROWD, 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 intermittent

discharges, difficulties in monitoring and limited physical control over the discharge, will require adequate time to implement and evaluate the effectiveness of best management practices. Therefore, the permit includes a procedure for determining whether storm water discharges are causing or contributing to exceedances of receiving water limitations and for evaluating whether the MSWMP contained in the ROWD must be revised in order to comply with this aspect of the Order. The Order establishes an iterative process to determine 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 48, below. These plans and policies contain numeric and narrative water quality standards for the water bodies in this Region. This Order does not contain numeric effluent limitations for any constituents because the impact of the storm water discharges on the water quality of the receiving waters has not yet been fully determined. Continuation of water quality/biota monitoring and analysis of the data are essential to make that determination. The current Basin Plan, or any further changes to the Basin Plan, may be grounds for the permittees to revise some or all of its ROWD.

42. The 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 have developed a Storm Water Implementation Agreement

between the County, its cities and the San Bernardino County Flood Control District. The Implementation Agreement established the responsibilities of each party and a funding mechanism for the shared costs and recognizes the establishment of a Management Committee for overall guidance and as a decision making body.

45. It is important to control litter and eliminate trash and other materials in stormwater runoff. In addition to the municipal ordinances prohibiting litter, the permittees also organize solid waste collection programs, household hazardous waste collections, and recycling programs to reduce litter and illegal discharges.

46. Reach 4 of the Santa Ana River which extends from Mission Boulevard in Riverside to the San Jacinto Fault in San Bernardino is an impaired water body listed on the 303(d) list for pathogens from non-point sources. These elevated levels may in part be attributed to discharges from the MS4 systems. This Order requires the permittees to investigate and characterize MS4 discharges to tributaries to the Santa Ana River, Reach 4, for potential bacterial contribution.

47. 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. The permittees are required to continue their efforts in public education programs.

48. The permittees established a subcommittee consisting of a number of permittees, the Building Industry Association, the development industry, the California Restaurant Association, and the Western States Petroleum Association and developed the "Guidelines for New Development and Redevelopment." The guidance document includes a list of routine structural and non-structural Best Management Practices for new developments. 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 (WQMP). This Order requires additional structural and non-structural BMPs for new developments and significant redevelopments only if an equivalent regional and/or watershed-wide management program is not being implemented.

49. 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 where 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, regional planning and coordination programs and regional monitoring programs.

50. The storm water regulations require public participation in the storm water management program development and implementation. 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. In response to public comments, the permittees may modify reports, plans, or schedules prior to submittal to the Executive Officer.

51. 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.

52. The Regional Board has considered anti-degradation requirements, pursuant to 40 CFR 131.12 and State Board Resolution 68-16, for the permitted discharges. 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 storm water quality. The Regional Board finds that the storm water discharges are consistent with the federal and state anti-degradation requirements and a complete anti-degradation analysis is not necessary.

53. 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.

54. 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 the regulations and guidelines adopted thereunder, shall comply with the following:

I. RESPONSIBILITIES OF THE PRINCIPAL PERMITTEE:

The principal permittee shall be responsible for managing the overall storm water program and shall:

1. Conduct chemical, biological and bacteriological water quality monitoring as required by the Executive Officer of the Regional Board.

2. Implement management programs, monitoring programs, and related plans as required by this Order.

3. Prepare and submit to the Executive Officer of the Regional Board, unified reports, plans, and programs necessary to comply with this Order.

4. Coordinate and conduct Management Committee meetings as specified in the ROWD. The principal permittee will take the lead role in initiating and developing area-wide programs and activities necessary to comply with the NPDES Permit.

5. Coordinate permit activities and participate in any subcommittees formed as necessary, to coordinate compliance activities with this Order.

6. Provide technical and administrative support and inform the co-permittees of the progress of other pertinent municipal programs, pilot projects, research studies, and other information to facilitate implementation of co-permittees' storm water program.

7. Coordinate the implementation of area-wide storm water quality management activities such as monitoring program, public education, pollution prevention, etc.

8. Gather and disseminate information on the progress of statewide municipal storm water programs and evaluate the information for potential use in the execution of this Order.

9. Monitor the implementation of the plans and programs required by this Order and determine their effectiveness in attaining water quality standards. This determination shall include a comparative analysis of monitoring data to the USEPA Multi-Sector Permit Parameter Benchmark Values and applicable water quality objectives for inland surface streams. A pollutant source investigation and control plan shall be developed and implemented where elevated pollutant levels are identified. This plan shall be included in the annual report submitted to the Executive Officer.

10. Coordinate with the Regional Board activities pertaining to implementation of this Order, including the submittal of all reports, plans, and programs as required under this Order.

11. Solicit and coordinate public input for any major proposed storm water management programs and implementation plans.

12. Develop and implement mechanisms, performance standards, etc., to promote consistent implementation of BMPs among the permittees.

13. Cooperate in watershed management programs and regional and/or statewide monitoring programs.

In addition, the activities of the principal permittee shall, at a minimum, include the following for MS4 systems owned and operated by the SBCFCD:

14. Pursue enforcement actions as necessary within its jurisdiction to ensure compliance with storm water management programs, ordinances and implementation plans, including removal via enforcement authority of undocumented connections and prohibition of illegal discharges.

15. Conduct inspections and maintain the storm drain systems within its jurisdiction.

16. Review and revise, if necessary, policies and ordinances necessary to establish and maintain adequate legal authority, as required by the Federal Storm Water Regulations.

17. Respond to or arrange for responding to emergency situations such as accidental spills, leaks, illicit connections/illegal discharges, etc., to prevent or to reduce the discharges of pollutants to storm drain systems and waters of the U.S.

18. Take appropriate enforcement actions for illegal discharges to the MS4 systems within its jurisdiction.

19. In conjunction with the other permittees, implement the BMPs listed in the ROWD, and take such other actions as may be necessary to meet the MEP standard.

II. RESPONSIBILITIES OF THE CO-PERMITTEES

The co-permittees shall be responsible for managing the storm water program within their jurisdiction and shall:

1. Implement all program elements including but not limited to the management programs, monitoring programs, implementation plans and all BMPs outlined in the ROWD within each respective jurisdiction, and take such other actions as may be necessary to meet the MEP standard.

2. Enact and revise policies and ordinances necessary to establish and maintain adequate legal authority as stated in Section VI.1 of this Order and as required by the Federal Storm Water Regulations, 40CFR, Part 122.26(d)(2)(i)(A-F). By March 1, 2003, the permittees shall evaluate their ordinances to determine if they are authorized to impose administrative fines for storm water violations. Government Code Section 53069.4 authorizes cities to make violations of any ordinance subject to an administrative fine or penalty instead of criminal prosecution. If necessary, the permittees shall adopt ordinances to set a penalty structure and to authorize them to impose and collect fines administratively by March 1, 2004.

3. Conduct storm drain system inspections and maintenance in accordance with the uniform criteria developed by a subcommittee of the permittees.

4. Take appropriate enforcement actions for violations of the storm water regulations and ordinances for illegal discharges into the MS4 systems within the co-permitees' jurisdiction.

5. Prepare and submit to the principal permittee in a timely manner all required information necessary to develop a unified report for submittal to the Executive Officer of the Regional Board.

6. Designate at least one representative to the Management Committee and attend at least 9 out of the 11 Management Committee meetings per year. The principal

permittee shall be notified immediately, in writing of any changes to the designated representative to the Management Committee.

7. Conduct and/or coordinate with the principal permittee any surveys and characterizations needed to identify pollutant sources from specific drainage areas.

8. Review and comment on all plans, strategies, management programs, monitoring programs, as developed by the principal permittee or any subcommittee to comply with this Order.

9. Participate in committees or subcommittees formed to address storm water related issues to comply with this Order.

10. Respond to or arrange for responding to emergency situations such as accidental spills, leaks, illegal discharges/illicit connections, etc. to prevent or reduce the discharge of pollutants to storm drain systems and waters of the U.S.

11. Pursue enforcement actions as necessary within its jurisdiction for violations of storm water ordinances, prohibitions on illicit connections and illegal discharges, and other elements of its storm water management program.

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 connections and illegal discharges (non-storm water) from entering municipal separate storm sewer systems.

2. The discharge of storm water from permittees' municipal separate storm sewer systems 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 either a separate NPDES permit or as otherwise specified in this provision. The 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 Minimis permit may be required.

   a. Discharges covered by NPDES permits or written clearances issued by the Regional or State Board,

   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, appropriate BMPs shall be considered where practicable when not interfering with health and safety issues (see also Section XIV Provision 3);

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 issue Waste Discharge Requirements for discharges exempted from NPDES requirements, such as agricultural irrigation waters, if identified to be a significant source of pollutants. 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 item 3, above.

5. Non-storm water discharges from permittees' 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 Item 3, above.

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 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) contained in the Basin Plan, and amendments thereto, for surface or groundwater.

2. The MSWMP 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 MSWMP and its components and other requirements of this Order, including any modifications thereto.

3. If exceedances of water quality objectives or water quality standards (collectively, WQS) persist, notwithstanding implementation of the MSWMP 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. Determination of the effect of discharges from the MS4 systems on water quality standards shall include a comparative analysis of monitoring data to the USEPA Multi-Sector Permit Parameter Benchmark Values and applicable water quality objectives for inland surface streams as specified in Chapter 4 of the Basin Plan. A pollutant source investigation and control plan shall be developed and implemented where elevated pollutant levels are identified. The report shall address the causes of the impairment or exceedance, and the technical and economic feasibility of control actions available to the permittees to reduce or eliminate the impairment or exceedance. The report may be incorporated in the annual report 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 of the report described above by the Executive Officer, the permittees shall revise the storm water management programs 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 storm water management programs 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 storm water management programs, 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

No later than July 1 of each year, the permittees shall evaluate the storm water management structure and the Implementation Agreement and determine the need for any revision. The 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 and enforce adequate legal authority to control contribution of pollutants to the MS4.

2. The permittees shall take appropriate enforcement actions against any violators of their codes and/or ordinances in accordance with the formalized enforcement procedures developed by the Management Committee.

3. Permittees' ordinances or other local regulatory mechanisms shall include sanctions for violations. 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 storm drain ordinances, the permittees shall enact such ordinances by March 1, 2004.

4. 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 or sites which 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.

5. By November 15, 2003, the permittees shall review their storm drain ordinances and provide a report on the effectiveness of their ordinances and their enforcement, 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 these control measures:

a. Sewage, where a permittee operates the sewage collection system;

b. Wash water resulting from the hosing or cleaning of gas stations, and other type 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, and portable toilet servicing;

d. Wash water from mobile auto detailing and washing, steam and pressure cleaning, carpet cleaning, and other such mobile commercial and industrial operations;

e. Water from cleaning of municipal, industrial, commercial, residential areas (including parking lots), streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas containing chemicals or detergents and without prior sweeping;

f. Runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials,

g. Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; pool filter backwash containing debris and chlorine;

h. Pet waste, yard waste, debris, sediment, and other wastes or materials that have potential adverse impacts on the water quality;

i. Restaurant wastes such as grease, floor mat and trash bin wash water, food waste, and other food service wastes.

6. The principal permittee or subcommittee shall, on or before March 1, 2003, 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 floor mats, filters and garbage containers are not washed in those areas and that no washwater is discharged 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.

7. By March 1, 2004, each permittee shall submit a statement (signed by its 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.

VII. ILLEGAL DISCHARGE/ILLICIT CONNECTIONS; LITTER, DEBRIS AND TRASH CONTROL

1. The permittees shall continue to prohibit all illicit connections and illegal discharges to the MS4s through their ordinances, inspections, and monitoring programs. If routine inspections or dry weather monitoring indicate any illicit connections, they shall be investigated and eliminated or permitted within 60 days of discovery and identification. The permittees shall maintain a database that identifies both permitted and status of unpermitted connections resulting from routine inspections and dry weather monitoring. This information shall be updated on an ongoing basis and submitted annually beginning with the 2002-2003 annual report.

2. All reports of spills, leaks, and/or illegal dumping shall be promptly investigated. Those incidents that 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.) shall be reported to the Executive Officer within 24 hours by phone or e-mail, with a written report within 10 days. At a minimum, all sewage spills above 1,000 gallons and all reportable quantities of hazardous substance spills as per 40 CFR 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/Fire Department for approval by the Executive Officer.

3. The permittees shall 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 required 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, along with supporting field data shall be included in the 2002-2003 annual report.

5. By July 1, 2003, the permittees shall determine the need for any additional debris control measures. The findings shall be included in the 2002-2003 annual report.

VIII. MUNICIPAL INSPECTIONS OF CONSTRUCTION SITES

1. The permittees shall develop by January 31, 2003, an inventory of all construction sites within their 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, 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 Waste Discharge Identification (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 Biological Significance (ASBS).

3. The permittees shall conduct construction site inspections for compliance with their ordinances (grading, Water Quality Management Plans, etc.), 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 May 31 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 2002-2003 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., June 1 through September 30 of each year), all construction sites shall be inspected at least once to determine the adequacy of sediment and other pollutant control measures.

   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, above, or must be linked to that database. A

copy of this database must be provided to the Regional Board with each annual report.

4. The permittees shall enforce their 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, the permittees shall provide oral or email 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 wild life, 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 Items 1 and 3c, above, or must be linked to these databases.

6. The inspectors responsible for verifying 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. The permittees shall have adequately trained their inspection staff by December 31, 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 FACILITIES

1. The permittees shall develop by July 1, 2003, an inventory of industrial facilities within their 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, Standard Industrial Classification (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); and facilities with a high potential for or history of unauthorized, non-storm water discharges.

3. The permittees 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 Section 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 or within the compliance schedule prescribed by the permittee in a written notice to the discharger). Once compliance is achieved, a minimum inspection frequency of once every four months will be maintained for the next calendar year.

5. By September 1, 2005, the permittees 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, above, or must be linked to that database. A copy of this database must be provided to the Regional Board with each annual report.

7. The permittees shall enforce their 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 of discovery, the permittees shall provide oral or email 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 wild life, 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 verifying compliance at industrial and 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 activities; the potential effects of industrial discharge and urbanization on water quality; and implementation and maintenance of pollutant control BMPs. The permittees 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 and 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.

X. MUNICIPAL INSPECTIONS OF COMMERCIAL FACILITIES

1. The permittees shall develop by July 1, 2003, an inventory of the following commercial facilities/companies listed below within their 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 permittees determine may contribute a significant pollutant load to their MS4.

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. The permittees 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, the permittees 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 have been 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, above, or must be linked to that database. A copy of this database must be provided to the Regional Board with each annual report.

7. The permittees shall enforce their 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 of discovery, the permittees shall provide oral or email 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 wild life, 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. All written reports shall detail the nature of the non-compliance, identify any corrective action taken by the site owner, and 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 permittees. 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. The permittees 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.

XI. SEWAGE SPILLS, INFILTRATION INTO MS4 SYSTEMS FROM LEAKING SANITARY SEWER LINES, SEPTIC SYSTEM FAILURES, AND PORTABLE TOILET DISCHARGES

1. The Executive Officer will request the local sewering agencies to take the lead and develop a unified response guidance, in cooperation with the Principal Permittee. The Principal Permittee shall collaborate with the local sewering agencies to develop a unified response mechanism to respond to sewage spills that may have an impact on receiving water quality. The permittees shall provide local sanitation districts 24-hour access to the MS4s to address sewage spills. The permittees shall work cooperatively with the local sewering agencies to determine and control the impact of infiltration from leaking sanitary sewer systems on storm water quality.

2. By July 1, 2003, the permittees, whose jurisdictions have 50 or more septic tank 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.

3. The principal permittee shall collaborate with the local sewering agencies to develop a unified response mechanism to respond to any sewage spills that may have an impact on receiving water quality. The Executive Officer will request the local sewering agencies to take the lead and develop the unified response guidance, by no later than July 1, 2003, in cooperation with the principal permittee.

4. 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 October 15, 2002, the permittees shall establish a mechanism to ensure (prior to issuance of any local permits or other approvals) that all construction projects and industrial facilities that are required to obtain coverage under the State's General Storm Water Permits have filed with the State Board a Notice of Intent to be covered by the relevant General Permit. Applicants shall be required to provide a copy of the Waste Discharger Identification Number (WDID) issued by the State Board as evidence of coverage under the General Permit.

2. By September 1, 2002, the permittees shall review and modify the approval process for building, grading, and similar permits to include incorporation of BMPs as provided in the Guidelines for New Development and Redevelopment.

3. The permittees shall review and revise the storm water management program and implement any changes in the program, as necessary, in order to require construction site dischargers to reduce pollutants in runoff from construction sites during all construction phases. At a minimum, the program shall address:

   a. Pollution prevention measures and public education

   b. Grading Ordinance and any other local requirements

   c. Verification of coverage under the State's General Permit

   d. Prioritization and inspection of construction sites

   e. Procedures for reporting non-compliance

   f. Procedures for review and approval of WQMP.

      The permittees shall require applicants to prepare a WQMP in accordance with Appendix B of the ROWD and to incorporate identified structural and non-structural BMPs into the development.

   g. Implementation of the new development BMPs, or identification of wateshed or sub-watershed BMPs that new development projects could participate in.

4. The permittees shall review and revise the storm water management program and implement any changes in the program, as necessary in order to require industrial/commercial site dischargers to reduce pollutants in runoff from new industrial/commercial sites. At a minimum, this program shall address:

   a. Pollution prevention measures and public education

b. Source identification and prioritization

c. Monitoring and inspection of industrial/commercial sites

d. Verification of coverage under the State's General Permit

e. Enforcement of local ordinances and other requirements for industrial/commercial sites

f. Procedures for reporting non-compliance.

g. Procedures for review and approval of WQMP.

The permittees shall require applicants to prepare a WQMP in accordance with Appendix B of the ROWD and incorporate identified structural and non-structural BMPs into the development.

5. The permittees shall minimize the short and long-term impacts on receiving water quality from new developments and re-developments within its jurisdiction as required in Section B.1 below. In order to reduce pollutants and runoff flows from new developments and re-developments to the maximum extent practicable, permittees shall at a minimum:

a. Review General Plan/CEQA Processes to address storm water issues

b. Review and modify project approval process

c. Conduct public and business education.

6. By February 15, 2003, the permittees shall review their planning procedures and CEQA document preparation processes to ensure that storm water-related issues are properly considered and addressed. If necessary, these processes should be revised 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 the 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 in the annual report for the corresponding year that the review is completed. All actions found necessary shall be completed by February 15, 2004 and reported in the annual report for the corresponding year. 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 or 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.

f. Potential for significant increases in erosion of the project site or surrounding areas.

7. 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 principles 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 shall include the following considerations:

a. Limit disturbance of natural water bodies and drainage systems; conserve natural areas; protect slopes and channels; 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 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, stream habitat; minimize the quantity of storm water directed to impermeable surfaces and the MS4s; maximize the percentage of permeable surfaces to allow more percolation of storm water into the ground;

c. Preserve wetlands, riparian corridors, and buffer zones; 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.

8. 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 Government Code Section 65350 et

seq.

9. By September 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.

10. 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.

11. 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 proposal 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.

12. The permittees shall continue to implement BMPs for new development and for public works construction.

13. By July 1, 2003, the permittees shall review their Guidelines for New Development and Redevelopment to determine the need for any revisions.

B. WATER QUALITY MANAGEMENT PLAN (WQMP) FOR URBAN RUNOFF (FOR NEW DEVELOPMENT/SIGNIFICANT RE-DEVELOPMENT)

1. By January 1, 2004 , the permittees shall review their existing BMPs for new developments 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. Significant re-development is defined as the addition or creation of 5,000 or more square feet of impervious surface on an already developed site. This includes, but is not limited to, additional buildings and/or structures, extension of existing footprint of a building, construction of parking lots, etc. 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 the entire development.

   b. Home subdivisions of 10 units or more. This includes single family residences, multi-family residence, condominiums, apartments, etc.

c. Industrial/commercial developments of 100,000 square feet or more. Commercial developments include non-residential developments such as hospitals, educational institutions, recreational facilities, mini-malls, hotels, office buildings, warehouses, and light 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. Hillside developments of 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 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 systems, and a funding source or sources for its operation and maintenance. The goal of the WQMP is to develop and implement 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 technology (BCT).

b. The discharge of any listed pollutant to an impaired waterbody on the 303(d) list shall not cause or contribute to an exceedance of receiving water quality objectives.

3. Pending revision of the WQMP requirements, the permittees shall implement their proposed program detailed in Section 4 of the ROWD. If the Executive Officer does not approve the revised WQMP by June 1, 2004, as meeting

the goals proposed in Section XII.B.2, above, and providing an equivalent or superior degree of treatment as the sized criteria outlined below, structural BMPs shall be required for all new development and significant redevelopment[5]. 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 treatment, either on a site basis or a watershed basis:

a. Volume

Volume-based BMPs shall be designed to infiltrate or treat either:

1) The volume of runoff produced from a 85th percentile 24-hour storm event, as determined from the local historical rainfall record[6]; 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 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

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[5] Where new development is defined as projects for which tentative tract or parcel map approval was not received by June 1, 2004 and new re-development is defined as projects for which all necessary permits were not issued by June 1, 2004. However, projects that have not commenced grading by the initial expiration date of the tentative tract or parcel map approval shall be deemed a new development project as defined in this section. New development does not include projects receiving map approvals after June 1, 2004 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 June 1, 2004.

[6] The Permittees are encouraged to calculate the 85th percentile storm event for each of their jurisdictions using local rain data pertinent to their jurisdiction.

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.

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. 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.

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 certain phases of the common scheme may not have BMP capacity located on that phase in accordance with the requirements specified above.

C. GROUNDWATER PROTECTION

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 be used in industrial or high vehicular traffic areas (25,000 or greater average daily traffic).
4. Structural infiltration treatment BMPs shall be located at least 100 feet horizontally from any water supply wells.
5. The vertical distance from the bottom of any infiltration structural treatment BMP to the historic high groundwater mark shall be at least 10 feet.
6. Structural infiltration treatment BMPs shall not cause a nuisance or pollution as defined in Water Code Section 13050.

XIII. PUBLIC EDUCATION AND OUTREACH

1. The permittees shall continue to implement the public education efforts already underway and shall implement all elements of the comprehensive public and business education strategy contained in the ROWD. By October 30, 2002, the permittees shall complete a public awareness survey to determine the effectiveness of the current public and business education strategy.

2. When feasible, the permittees shall participate in a 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, 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. By January 15, 2003, the Management 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 5 million impressions per year and that those impressions measurably increase the knowledge and measurably change the behavior of the targeted groups. By January 15, 2003, the Management 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. The Committee shall ensure implementation of BMPs listed in the ROWD (Appendix C) for restaurants, automotive service centers, gasoline service stations and other similar facilities. The permittees shall distribute these BMP brochures or fact sheets to these facilities during inspections and/or through other means. 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 during the permit term.

4. By September 15, 2002, the permittees shall develop public education materials to encourage the public to report (including a hotline telephone number to report) illegal dumping 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 website 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 September 1, 2003, the permittees shall develop BMP guidelines 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, guidelines for mobile vehicle maintenance activities, carpet cleaners, commercial landscape maintenance, and pavement cutting. These guidelines shall be distributed to the public, trade associations, etc., through participation in community events, trade association meetings, and/or mail.

6. By September 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. These mechanism(s) for distributing educational materials to businesses shall be implemented by March 1, 2004.

XIV. MUNICIPAL FACILITIES/ACTIVITIES

1. Each permittee shall adopt the performance goals and implement the commitments included under Section 5.5 of the ROWD to prevent public agency facilities and activities from causing or contributing to a pollution or nuisance in receiving waters.

2. By September 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, 2003, the permittees, in coordination with the San Bernardino 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 firefighting flows.

4. By October 1, 2002, the Management Committee shall develop and distribute to all permittees a BMP fact sheet to address public agency activities such as road construction and maintenance, street sweeping, catch basin stenciling, drainage facility cleaning and maintenance, etc. This shall be reported in the 2002-2003 annual report.

5. By October 1, 2002, the Management Committee shall develop and distribute BMP guidelines for public agency and contract field operations and maintenance staff. These guidelines shall describe appropriate pollution control measures, appropriate response to spills and illegal discharges, etc. Contractor training requirements shall be included in new contracts and contracts that come up for renewal. This shall be reported in the 2002-2003 annual report.

6. At least on an annual basis, each permittee shall provide training to public agency staff and to contract field operations staff on fertilizer and pesticide management, model maintenance procedures, and implementation of other pollution control measures. Each permittee shall designate key staff involved in public agency activities to attend at least three such training sessions during the five-year term of this permit (from 2002-2007).

7. By July 1, 2003, the Management Committee shall evaluate the efficiency and cost effectiveness of the available BMPs for litter control and develop recommendations for any needed improvements. This shall be reported in the 2002-2003 annual report.

8. Each permittee shall identify areas that are not subject to street sweeping due to lack of continuous curb and gutter, and evaluate their potential for impacting storm water quality. Appropriate BMPs shall be implemented where significant water quality impact is identified. This shall be reported in the 2002-2003 annual report.

9. Each permittee shall inspect all of their inlets, open channels, and basins at least once during each reporting year 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 BMP fact sheet developed by the Management Committee. The inspection and maintenance frequency for all or portions of the drainage facilities shall be evaluated annually to determine the need for increasing the inspection and maintenance frequency. This information shall be included in the annual report.

10. Each permittee shall clean those drainage facilities where the inspection reveals that the sediment/storage volume is 25% full, or where there is evidence of illegal discharge or if accumulated sediment or debris impairs the hydraulic capacity of the facility.

11. Successful implementation of the provisions in this Order will require the cooperation of all the public agency organizations within San Bernardino County having programs/activities that have an impact on storm water quality (e.g., Fire Department, Department of Environmental Health, Planning Department, Transportation Department, Parks and Recreation, Building and Safety, Code Enforcement, etc.) As such, these organizations are expected to actively participate in implementing this area-wide storm water program. The permittees shall be responsible for involving the public agencies in their storm water program.

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.

2. No later than March 10, 2003 or as specified in the latest version of the State General Stormwater Construction Permit, the permittees shall comply with the

requirements for municipal construction projects that may result in land disturbance greater than one acre.

3. 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.

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 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.

5. 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.

6. 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.

7. All other terms and conditions of the latest version of the State's General Construction Activity Storm Water Permit shall be applicable.

XVI. PROGRAM MANAGEMENT/MSWMP REVIEW

1. By October 1 of each year, the permittees shall evaluate the MSWMP to determine the need for any revisions. At a minimum, the first annual review after adoption of this Order shall include:

   a. A description of any additional formal training needs for municipal employees.

   b. A description of the need for additional coordination meeting/training for the designated NPDES inspectors.

2. The annual report submitted each year shall include the findings of the MSWMP review and a schedule for any needed revisions.

3. The permittees shall modify the MSWMP, 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 for impaired water bodies.

4. The Management Committee will continue to meet at least 11 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 not less than 9 out of 11 meetings.

XVII. FISCAL RESOURCES

The permittees shall provide adequate funding for administration, implementation and enforcement of the areawide storm water management program elements and local storm water programs. 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 each year and shall, at a minimum, include the following:

1. Each permittee's expenditures for the previous fiscal year,
2. Each permittee's budget for the current fiscal year,
3. A description of the source of funds, and
4. Each permittee's estimated budget for the next fiscal year.

XVIII. PROVISIONS

GENERAL

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 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.
3. Permittees shall demonstrate compliance with all the requirements in this Order and specifically with Section III. Discharge Limitations, and Section IV. Receiving Water Limitations, through timely implementation of their MSWMP, its components 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 MSWMP and its components, as included in the ROWD, including any approved amendments thereto is hereby made an enforceable component of this Order.
4. 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 during the development and implementation of urban runoff management programs are necessary to minimize potential vector habitat and public health impacts resulting from vector breeding. Nothing in this permit 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.

5. The permittees shall, at a minimum, implement all elements of the MSWMP and its components, as included in the ROWD. Where the dates are different from the corresponding dates in this Order, the dates in this Order shall prevail. Any proposed revisions to the MSWMP shall be submitted with the Annual Report to the Executive Officer of the Regional Board for review and approval. All approved revisions to the MSWMP 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 MSWMP and its components, 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.

6. The permittees shall comply with Monitoring and Reporting Program No. R8-2002-0012 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 programs in lieu of or in addition to Monitoring and Reporting Program No. R8-2002-0012.

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, and

   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.

9. The permittees shall immediately report any discharge that may endanger human health or the environment including any unauthorized discharge to the Executive Officer or his designee (909-782-3238, or by e-mail to: sw@rb8.swrcb.ca.gov) and to the Office of Emergency Services (1-800-852-7550). This reporting should be done by phone or e-mail as soon as the permittees become aware of the circumstances. A written report of the discharge or incident shall be submitted to the Executive Officer within five days.

10. The permittees shall not issue occupancy permits unless the applicant is informed of his obligation under the State's General Industrial Activities Storm

Water Permit. The permittees shall not issue any grading permit for construction activities which will disturb five 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 or when Phase II requirements become effective) until proof of coverage with the State's General Construction Activity Storm Water Permit is verified. The proof of coverage may include a letter from the Regional Board office, a copy of the Notice of Intent, Waste Discharger Identification number, etc.

11. The 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.

XIX. PERMIT EXPIRATION AND RENEWAL

1. This Order expires on April 27, 2007 and the permittees must file a new 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 Report of Waste Discharge 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 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

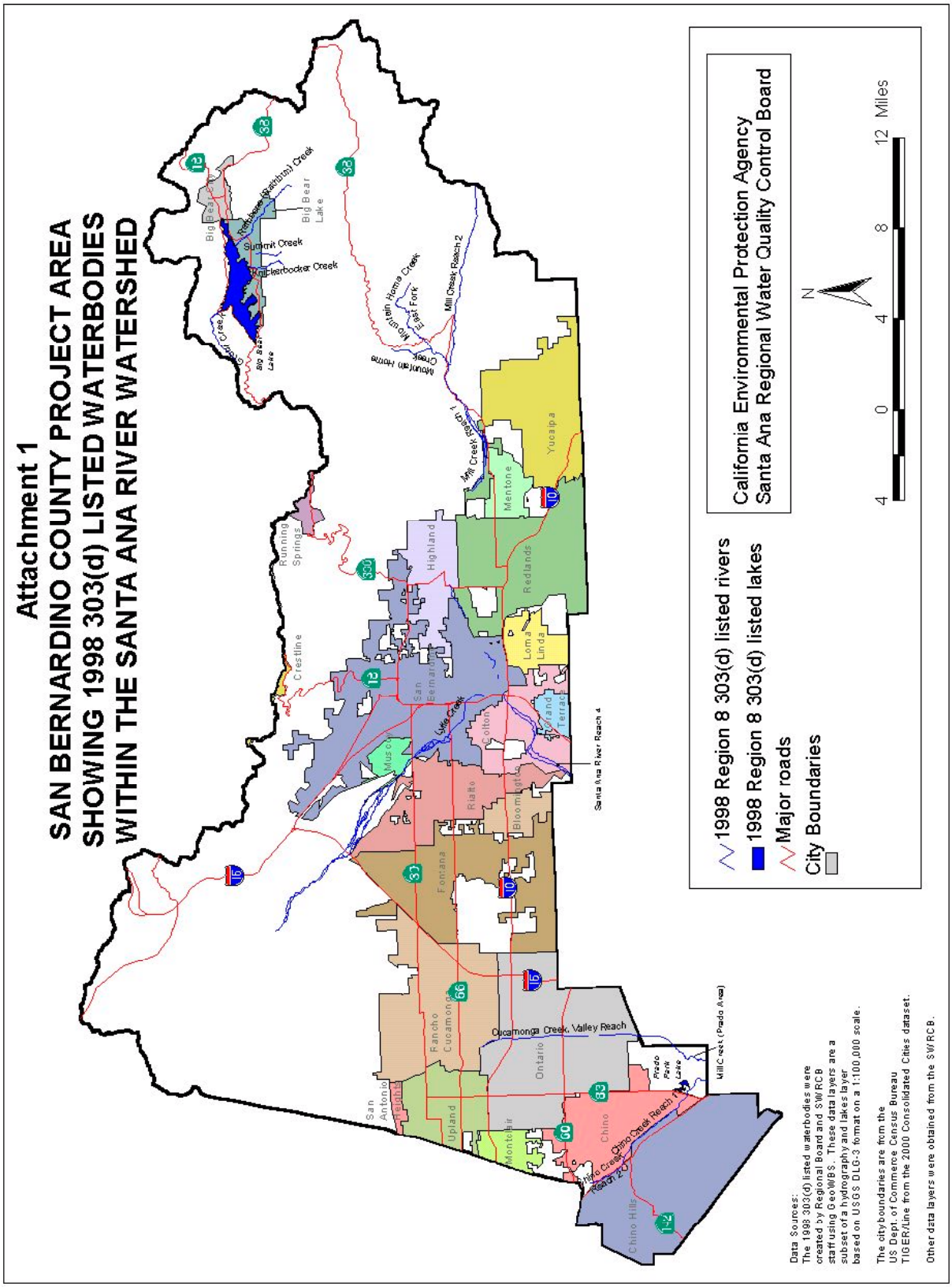
d. To incorporate any requirements imposed upon the permittees through the TMDL process.

3. This Order shall serve as 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 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. 96-32 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 April 26, 2002.

Gerard J. Thibeault
Executive Officer


Attachment 1
SAN BERNARDINO COUNTY PROJECT AREA
SHOWING 1998 303(d) LISTED WATERBODIES
WITHIN THE SANTA ANA RIVER WATERSHED
California Environmental Protection Agency
Santa Ana Regional Water Quality Control Board
1998 Region 8 303(d) listed rivers
1998 Region 8 303(d) listed lakes
Major roads
City Boundaries
N
4 0 4 8 12 Miles
Data Sources:
The 1998 303(d) listed waterbodies were created by Regional Board and SWRCB staff using GeoWBS. These data layers are a subset of a hydrography and lakes layer based on USGS DLG-3 format on a 1:100,000 scale.
The city boundaries are from the US Dept. of Commerce Census Bureau TIGER/Line from the 2000 Consolidated Cities dataset.
Other data layers were obtained from the SWRCB.
Big Bear City
Big Bear Lake
Summit Creek
Knickerbocker Creek
Mountain Home Creek
East Fork
Mill Creek Reach 2
Mill Creek Reach 1
Running Springs
Crestline
Highland
Mentone
Yucaipa
Redlands
Loma Linda
San Bernardino
Colton
Grand Terrace
Muscoy
Little Creek
Rialto
Bloomington
Santa Ana River Reach 4
Fontana
Rancho Cucamonga
Cucamonga Creek, Valley Reach
Ontario
Prado Park Lake
Mill Creek (Prado Area)
San Antonio Heights
Upland
Montclair
Chino
Chino Creek Reach 1
Chino Creek Reach 2
Chino Hills

Attachment 2

Inland Surface Streams

A. Santa Ana River

Santa Ana River, Reaches 4, 5, and 6

B. San Bernardino Mountain Streams

Mill Creek Drainage

Mill Creek, Reaches 1 and 2

Mountain Home Creek

Mountain Home Creek, East Fork

Monkey Face Creek

Alger Creek

Falls Creek

Vivian Creek

High Creek

Other Tributaries: Lost, Oak Cove, Green, Skinner, Momyer and Glen Martin Creeks, and other Tributaries to these Creeks

Bear Creek Drainage

Bear Creek

Siberia Creek

Slide Creek

All Other Tributaries to these Creeks

Big Bear Lake Tributaries

North Creek

Metcalf Creek

Grout Creek

Rathbone (Rathbun) Creek

Other Tributaries to Big Bear Lake: Johnson, Minnelusa, Polique, and Red Ant Creeks, and other Tributaries to these Creeks

Baldwin Lake Drainage

Shay Creek

Other Tributaries to Baldwin Lake: Sawmill, Green, and Caribou Canyons and other Tributaries to these Creeks.

C. Other Streams Draining to Santa Ana River (Mountain Reaches)

Cajon Creek

City Creek

Devil Canyon Creek

East Twin and Strawberry Creeks

Waterman Canyon Creek

Fish Creek

Forsee Creek

Plunge Creek

Barton Creek

Bailey Canyon Creek

Kimbark Canyon, East Fork Kimbark Canyon, Ames Canyon and West Fork Cable Canyon Creeks

Valley Reaches of Above Streams

Other Tributaries (Mountain Reach): Alder, Badger Canyon, Bledsoe Gulch, Borea Canyon, Breakneck, Cable Canyon, Cienega Seca, Cold, Converse, Coon, Crystal, Deer, Elder, Fredalba, Frog, Government, Hamilton, Heart Bar, Hemlock, Keller, Kilpecker, Little Mill, Little Sand Canyon, Lost, Meyer Canyon, Mile, Monroe Canyon, Oak, Rattlesnake, Round Cienega, Sand, Schneider, Staircase, Warm Springs Canyon and Wild Horse Creeks, and other tributary to these Creeks.

D. San Gabriel Mountain Streams (Mountain Reaches)

San Antonio Creek

Lytle Creek (South, Middle, and North Forks) and Coldwater Canyon Creek

Day and East Etiwanda Creeks

Valley Reaches of Above Streams

Cucamonga Creek (Mountain Reach)

Cucamonga Creek (Valley Reach)

Other Tributaries (Mountain Reaches): San Sevaine, Deer, Duncan Canyon, Henderson Canyon, Stoddard Canyon, Icehouse Canyon, Cascade Canyon, Cedar, Falling Rock, Kerkhoff and Cherry Creeks, and other Tributaries to these Creeks.

E. San Timoteo Area Streams

San Timoteo Creek, Reaches 1 and 2

Oak Glen, Potato Canyon and Birch Creeks

Yucaipa Creek

F. Prado Area Streams

Chino Creek

G. Lake and Reservoirs

Baldwin Lake

Big Bear Lake

Jenks Lake

Attachment 3

LIST OF OTHER ENTITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS TO THE SAN BERNARDINO COUNTY STORM WATER CONVEYANCE SYSTEM[7]

Government Agencies

U.S. Army Corps of Engineers

U.S. Department of Agriculture - Forest Services, San Bernardino County National Forest

California Department of Transportation (Cal Trans)

California Department of Parks and Recreation - Chino Hills State Park

Inland Valley Development Agency, San Bernardino International Trade Center and Airport

Hospitals

Bear Valley Community Hospital

Chino Community Hospital

Doctors Hospital

Kaiser Foundation Hospital

Loma Linda Community Hospital

Loma Linda University Medical Center

Mountains Community Hospital

Ontario Community Hospital

Patton State Hospital

U.S. Department of Veterans Affair - Jerry L. Pettis Memorial Veterans Medical Center

Redlands Community Hospital

St. Bernardino Medical Center

San Antonio Community Hospital

San Bernardino Community Hospital

San Bernardino County Hospital

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[7] If any entity on this list is determined to cause or contribute to violations of this Order, the RWQCB will require the entity to either:1) secure an NPDES permit; or 2) become a permittee under this permit if acceptable to the existing permittees and subject to execution of the implementation agreement. Please refer to Finding 24 on page 8 of this Order.

Railroads

AT&SF Railway Company

Southern Pacific Railroad Company

School Districts

Alta Loma Elementary School District

Bear Valley Unified School District

Central Elementary School District

Chaffey Joint Union High School District

Chino Valley Unified School District

Colton Joint Unified School District

Cucamonga Elementary School District

Etiwanda Elementary School District

Fontana Unified School District

Mountain View Elementary School District

Mt. Baldy joint Elementary School District

Ontario-Montclair Elementary School District

Rialto Unified School District

Rim of the World Unified School District

Redlands Unified School District

San Bernardino City Unified School District

Upland Unified School District

Yucaipa Joint Unified School District

Universities and Colleges

California State University - California State University San Bernardino

San Bernardino Community College District - Chaffey College Campus

San Bernardino Community College District - Crafton Hills College Campus

San Bernardino Community College District - San Bernardino Valley College Campus

University of Redlands

Loma Linda University

Water Districts

Big Bear Municipal Water District

Inland Empire Utilities Agency

Cucamonga County Water District

East Valley Water District

Monte Vista Water District

San Bernardino Valley Municipal Water District

West San Bernardino County Water District

Yucaipa Valley Water District

Transportation

Omnitrans

Metrolink (Fontana, Montclair, Ontario, Rancho Cucamonga, Rialto, San Bernardino)

Redlands Municipal Airport

Rialto Municipal Airport

Chino Airport

Cable Airport

Other Potential Dischargers

United States Postal Service

California National Guard

ATTACHMENT 4

GLOSSARY

Beneficial Uses – The uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. "Beneficial Uses" that may be protected against 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. Existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law. [California Water Code Section 13050(f)].

Best Available Technology (BAT) – BAT is the acronym for best available technology economically achievable. BAT is the technology-based standard established by congress in CWA section 402(p)(3)(A) for industrial dischargers of storm water. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of treatment and best management practices, or BMPs. For example, secondary treatment (or the removal of 85% suspended solids and BOD) is the BAT for suspended solid and BOD removal from a sewage treatment plant. BAT generally emphasizes treatment methods first and pollution prevention and source control BMPs secondarily.

The best economically achievable technology that will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants is determined in accordance with regulations issued by the Environmental Protection Agency Administrator. Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the permitting authority deems appropriate.

Best Conventional Technology (BCT) – BCT is an acronym for Best Conventional Technology. BCT is the treatment techniques, processes and procedure innovations, and operating methods that eliminate or reduce chemical, physical, and biological pollutant constituents.

Best Management Practices – Best Management Practices (BMPs) are defined in 40 CFR 122.2 as 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. In the case of municipal storm water

permits, BMPs are typically used in place of numeric effluent limits.

Bioaccumulate – The progressive accumulation of contaminants in the tissues of organisms through any route including respiration, ingestion, or direct contact with contaminated water, sediment, pore water, or dredged material to a higher concentration than in the surrounding environment. Bioaccumulation occurs with exposure and is independent of the tropic level.

Biological Integrity – Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5:55-68 as: "A balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region." Also referred to as ecosystem health.

Clean Water Act Section 402(p) – [33 USC 1342(p)] is the federal statute requiring municipal and industrial dischargers to obtain NPDES permits for their discharges of storm water.

Clean Water Act Section 303(d) Listed Water Body – is an impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology-based pollution controls required by the CWA. The discharge of urban runoff to these water bodies by the Co-permittees is significant because these discharges can cause or contribute to violations of applicable water quality standards.

Contamination – As defined in the Porter-Cologne Water Quality Control Act, contamination is "an impairment of the quality of 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 U.S. are affected.

Debris – Debris is defined as the remains of anything destroyed or broken, or accumulated loose fragments of rock.

Effluent Limitations – Limitations on the volume of each waste discharge, and the quantity and concentrations of pollutants in the discharge. The limitations are designed to ensure that the discharge does not cause water quality objectives to be exceeded in the receiving water and does not adversely affect beneficial uses.

Effluent limitations are limitations of the quantity and concentrations of pollutants in a discharge. The limitations are designed to ensure that the discharge does not cause water quality objectives to be exceeded in the receiving water and does not adversely affect beneficial uses. In other words, an effluent limit is the maximum concentration of a pollutant that a discharge can contain. To meet effluent limitations, the effluent typically must undergo one or more forms of treatment to remove pollutants in order to lower the pollutant concentration below the limit. Effluent limits are typically numeric (e.g., 10 mg/l).

Erosion – When land is diminished or wane away due to the effects of wind, water, or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via storm water runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building, and timber harvesting.

Grading – The cutting and/or filling of the land surface to a desired slope or elevation.

Hazardous Material – 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 the U.S. EPA to be reported if a designated quantity of the material is spilled into the waters of the United States or emitted into the environment.

Illicit Discharge – Any discharge to a municipal separate storm sewer 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 Executive Officer. .

MEP – MEP is the acronym for Maximum Extent Practicable. Maximum Extent Practicable means the standard for implementation of storm water management programs to reduce pollutants in storm water. CWA section 402(p)(3)(B)(iii) requires that municipal 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 Adminstrator or the State determines appropriate for the control of such pollutants. Specifically, municipalities must choose effective BMPs, and reject applicable BMPs only where other effective BMPs will serve the same purpose.

Municipal Storm Water Conveyance System – (See Municipal Separate Storm Sewer System or MS4).

Municipal Separate Storm Sewer System (MS4) – MS4 is an acronym for Municipal Separate Storm Sewer System. A Municipal Separate Storm Sewer System is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, natural drainage features or channels, modified natural channels, 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 designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designated or used for collecting of conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Historic and current development make use of natural drainage patterns and features as conveyances for urban runoff. Urban streams used in this manner are part of the municipalities MS4 regardless of whether they are natural, man-made, or partially modified features. In these cases, the urban stream is both an MS4 and a receiving water.

National Pollution Discharge Elimination System (NPDES) – Permits issued under Section 402(p) of the Federal Clean Water Act for regulating discharge of pollutants to waters of the United States.

Non-Point Source Pollution (NPS) – Non point source refers to diffuse, widespread sources of pollution. These sources may be large or small, but are generally numerous throughout a watershed. Non Point Sources include but are not limited to urban, agricultural, or industrial areas, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining, livestock grazing, as well as physical changes to stream channels, and habitat degradation. NPS pollution can occur year round any time rainfall, snowmelt, irrigation, or any other source of water runs over land or through the ground, picks up pollutants from these numerous, diffuse sources and deposits them into rivers, lakes, and coastal waters or introduces them into ground water.

Non-Storm Water – Non-storm water consists of all discharges to and from a storm water conveyance system that do not originate from precipitation events (i.e., all discharges from a conveyance system other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges. An illicit discharge is defined at 40 CFR 122.26(b)(2) as any discharge to a municipal storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a separate NPDES permit and discharges resulting from emergency fire fighting activities.

Nuisance – As defined in the Porter-Cologne Water Quality Control Act a nuisance is "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."

Numeric Effluent Limitations – The typical method by which effluent limits are prescribed for pollutants in waste discharge requirements implementing the federal NPDES regulations. When numeric effluent limits are met at the "end-of-pipe," the effluent discharge generally will not cause water quality standards to be exceeded in the receiving waters (i.e., water quality standards will also be met).

Person – A person is defined as an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof. [40 CFR 122.2].

Point Source – 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 operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged.

Pollution – As defined in the Porter-Cologne Water Quality Control Act, pollution is "the alteration of the quality of the waters of the U.S. by waste, to a degree that unreasonably affects either of the following: A) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses." Pollution may include contamination.

Pollutant – A pollutant is broadly defined as any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated.

Pollution Prevention – Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control, treatment, or disposal.

Post-Construction BMPs – A subset of BMPs including structural and non-structural controls which detain, retain, filter, or educate to prevent the release of pollutants to surface waters during the final functional life of development.

Receiving Water Limitations – Waste discharge requirements issued by the SARWQCB typically include both: (1) "Effluent Limitations" (or "Discharge Limitations") that specify the technology-based or water-quality-based effluent limitations; and (2) "Receiving Water Limitations" that specify the water quality objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the "Receiving Water Limitations" provision is the provision used to implement the requirement of CWA section 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet water quality standards.

Sediment – Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human induced land disturbance activities) is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources and does not regulate naturally occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

Storm Water – "Storm water" is as defined urban runoff and snowmelt runoff consisting only of those discharges which originate from precipitation events. Storm water is that portion of precipitation that flows across a surface to the storm drain system or receiving waters. Examples of this phenomenon include: the water that flows off a building's roof when it rains (runoff from an impervious surface); the water that flows into streams when snow on the ground begins to melt (runoff from a semi-pervious surface); and the water that flows from a vegetated surface when rainfall is in excess of the rate at which it can infiltrate into the underlying soil (runoff from a pervious surface). When all factors are equal, runoff increases as the perviousness of a surface decreases. During precipitation events in urban areas, rain water picks up and

transports pollutants through storm water conveyance systems, and ultimately to waters of the United States.

Toxicity – Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Total Maximum Daily Load (TMDL) – The TMDL is the maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under Clean Water Act Section 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

Urban Runoff – Urban runoff is defined as all flows in a storm water conveyance system and consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water illicit discharges (dry weather flows).

Waste – As defined in California Water Code Section 13050(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."

Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system which applies to solid and semi-solid waste which cannot be discharged directly or indirectly to water of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, nonhazardous solid waste, and inert waste.

Water Quality Objective – Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water. [California Water Code Section 13050 (h)] California's water quality objectives are established by the State/Regional Water Boards in the Water Quality Control Plans.

As stated in the Porter-Cologne Requirements for discharge (CWC 13263): "(Waste discharge) 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 objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241."

Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a receiving water and still generally ensure that the beneficial uses of the receiving water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne's definition of pollution. A

condition of pollution exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are the reason why all waste discharge requirements implementing the federal NPDES regulations require compliance with water quality objectives. (Water quality objectives are also called water quality criteria in the Clean Water Act.)

Water Quality Standards – are defined as the beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.,) of water and the water quality objectives necessary to protect those uses.

Waters of the United States – Waters of the United States can be broadly defined as navigable surface waters and all tributary surface waters to navigable surface waters. Groundwater is not considered to be a Waters of the United States.

As defined in 40 CFR 122.2, the Waters of the U.S. are defined as: **(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 seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. 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 the EPA.

Watershed – That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as drainage area, catchment, or river basin).

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SANTA ANA REGION

MONITORING AND REPORTING PROGRAM NO. R8-2002-0012

NPDES NO. CAS618036

FOR

THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT, THE COUNTY OF SAN BERNARDINO, AND THE INCORPORATED CITIES OF SAN BERNARDINO COUNTY WITHIN THE SANTA ANA REGION

AREA-WIDE URBAN STORM WATER RUNOFF

I. GENERAL

1) Revisions of the monitoring and reporting program may be necessary to ensure that the discharger is in compliance with requirements and provisions contained in this Order. Revisions may be made by the Executive Officer at any time during the term of this Order, and may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, number of sampling locations, or the number of samples collected.

2) All sample collection, handling, storage, and analyses shall be in accordance with 40 CFR Part 136.

3) The permittees are authorized to complement monitoring data from other sources provided those sources are identical to sources in the Santa Ana Watershed.

4) The Executive Officer is authorized to allow the permittees to participate in statewide, national, or other monitoring programs in lieu of this monitoring program.

5) The permittees shall develop and submit a consolidated monitoring program for approval by the Executive Officer of the Regional Board. The consolidated program for water quality monitoring should be capable of attaining the objectives mentioned below.

II. OBJECTIVES

The overall goal of this monitoring program is to develop and support an effective watershed management program. The following are the major objectives of this monitoring program:

1) To define water quality status, trends, and pollutants of concern associated with urban storm water discharges and their impact on the beneficial uses of the receiving waters.

2) To identify the sources of pollutants in storm water runoff to the maximum extent possible.

3) To characterize pollutants and to assess the influence of land use on water quality.

4) To identify significant water quality problems related to storm water discharges within the watershed.

5) To evaluate the effectiveness of existing management programs, including an estimate of pollutant reductions achieved by the structural and nonstructural BMPs.

6) To identify other sources of pollutants in storm water runoff to the extent possible (e.g., atmospheric deposition, contaminated sediments, other non-point sources, etc.).

7) To conduct monitoring in cooperation with Riverside County for investigation of bacteriological impairments in the upper Santa Ana River.

8) To verify and to control illegal discharges.

9) To identify those waters which without additional action to control pollution from storm water discharges cannot reasonably be expected to attain or maintain applicable water quality standards or the goals and requirements of the Basin Plan.

10) To evaluate costs and benefits to the stakeholder including the public.

The Principal Permittee has been monitoring storm water and receiving waters since the first permit term. It is recognized that some of these objectives may not have been attainable during the previous permit terms. It is hoped that continuous monitoring for long term shall help to accomplish these objectives. The Regional Board authorizes the Executive Officer to evaluate and determine adequate progress toward meeting each objective.

This Order references three components of the monitoring program: (1) The existing monitoring program shall continue to be implemented until the integrated watershed monitoring program is approved; (2) An integrated watershed monitoring program is to be developed under this Order to identify data gaps and to attain the above-mentioned objectives; and (3) Other regional monitoring efforts where the permittees participate or make monetary contributions.

III. MONITORING PROGRAM REQUIREMENTS

1. By July 1, 2003, the permittees shall complete the GIS-based mapping of drainage area information, including drainage system facilities, land uses, and receiving waters.

2. By December 1, 2003, the permittees shall complete an assessment of the relative pollutant loading from different drainage areas to the receiving waters. This information shall be reported in the annual reports starting in 2004.

3. By December 1, 2003, the permittees shall evaluate the effectiveness of selected BMPs in controlling pollutant loads in urban storm water runoff. The results shall be included in the annual reports starting from 2004.

4. By July 1, 2002, the principal permittee, in collaboration with the co-permittees, shall develop and submit for approval of the Executive Officer a bacteriological

monitoring program to determine the sources of bacteriological contamination in the Santa Ana River. This program shall include wet and dry weather monitoring in the River and its major tributaries within the permittees' jurisdiction.

5. By July 1, 2003, the permittees shall revise and submit for approval of the Executive Officer an integrated watershed monitoring program geared towards achieving the above stated objectives and additional objectives that the Executive Officer may deem appropriate. In developing this program, the principal permittee is encouraged to seek cooperation with the permittees from the Riverside and Orange Counties. The Executive Officer or his/her designated representative(s) shall facilitate the coordination meetings or subcommittees formed to achieve this goal. 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:

   a. Uniform guidelines for quality control, quality assurance, data collection and data analyses.

   b. A mechanism for the collection, analyses and interpretation of existing data from San Bernardino County monitoring programs and other similar programs. These and other data from local, regional or national sources should 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) Environmental indicators (e. g., ecosystem, biological, habitat, chemical, sediment, stream health, etc.) chosen for monitoring;

      3) Parameters selected for field screening and for laboratory work; and

      4) Total number of samples to be collected from each station, receiving water and major outfall monitoring, frequency of sampling during wet and dry weather, short duration or long duration storm events, type of samples (grab, 24-hour composite, etc.), and the type of sampling equipment.

   d. A mechanism for analyzing the collected data and interpreting the results including:

      1) An evaluation of the effectiveness of the best management practices, and need for any refinement of the management

practices;

2) An evaluation of water quality status, trends, and pollutants of concern associated with urban storm water discharges and their impact on the beneficial uses of the receiving waters;

3) Characterization and identification of sources of pollutants in storm water runoff and an assessment of the influence of land use on water quality;

4) Identification of significant water quality problems related to storm water discharges within the watershed;

5) Evaluation of the effectiveness of existing management programs, including an estimate of pollutant reductions achieved by the structural and nonstructural BMPs;

6) Evaluation of sources of bacteriological contamination in the upper Santa Ana River in coordination with Riverside County;

7) Identification of those waters which without additional action to control pollution from storm water discharges cannot reasonably be expected to attain or maintain applicable water quality standards specified in the Basin Plan; and

8) Analysis and interpretation of the collected data to determine the impact of storm water runoff and/or validate any water quality models.

6. The pemittees shall cooperate with the Southern California Coastal Water Research Project (SCCWRP) in regional monitoring and assessment efforts including, but not limited to the evaluation and development of an Index of Biological Integrity for Southern California.

7. 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.

8. Pending approval of the integrated watershed monitoring program, the permittees shall continue existing wet weather monitoring at storm drain monitoring Sites 2, 3, and 5, as identified in the approved monitoring program amended on January 24, 2001. The permitees shall focus on source identification and source control efforts based on the results of these and other monitoring efforts.

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 U.S. EPA, Region 9, no later than November 15 of each year. This progress report may be submitted in a mutually agreed upon electronic format. At a minimum, the 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 ROWD. The effectiveness may be measured in terms of how successful the program has been in eliminating illicit/illegal discharges and in 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. An analysis and discussion of the monitoring results and any impacts on the receiving waters. Also, recommendations for corrective actions during the upcoming year of management program implementation and monitoring.

   e. An analysis of the effectiveness of the overall storm water management program and identification of proposed programs which will result in the attainment of the water quality standards, and a time schedule to implement the new programs.

   f. An assessment of the public education program (including industrial facilities and construction sites) and educational activities proposed for the upcoming year.

   g. A progress report on the prosecution of illegal dischargers and reduction or elimination of illegal discharges.

   h. An assessment of the permittees' compliance status with the Receiving Water Limitations, Section IV of the Order, including any proposed modifications to the ROWD and MSWMP if the Receiving Water Limitations are not fully achieved.

3. Permittees shall be responsible for the submittal of all required information and materials needed to comply with this Order in a timely manner to the principal permittee. All such submittals shall be signed by a duly authorized representative of the permittee under penalty of perjury.

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:

Reporting Schedule (Order R8-2002-0012)		
ITEM	**COMPLETION DATE/FREQ.**	**REPORT DUE DATE**
II. Evaluate ordinances to determine authority to impose administrative fines for storm water violations	March 1, 2003	Nov. 15, 2003
IV. RECEIVING WATER LIMITATIONS: Pollutant source investigation and control plan to prevent or reduce pollutants from MS4 systems causing or contributing to exceedance of water quality standards	As needed	Nov. 15
V. IMPLEMENTATION AGREEMENT: Evaluate storm water management structure and implementation agreement	Annually	July 1
VI. LEGAL AUTHORITY/ ENFORCEMENT: Review water quality ordinances and provide a report on the effectiveness of these ordinances and their enforcement, in prohibiting different types of discharges	One Time	Nov. 15, 2003
The principal permittee or subcommittee shall develop a restaurant inspection program	March 1, 2003	March 1, 2003
Submit a statement signed by legal counsel that permittee has obtained all necessary authority to comply with this Order through adoption of ordinances and/or municipal code modifications	One Time	March 1, 2004
VII. ILLEGAL/ILLICIT CONNECTIONS; LITTER, DEBRIS AND TRASH CONTROL: Spills , leaks, and/or illegal dumping (with immediate threat to human health or environment) shall be promptly investigated and reported	Ongoing	Within 24 hours by phone or e-mail, written within 10 days
All sewage spills above 1,000 gallons and all reportable quantities of hazardous substance and hazardous waste spills	Ongoing	Within 24 hours

All other spill incidents	Annually	Nov. 15
Update Illicit connection database on an ongoing basis and report annually	Nov. 15, 2002, annually thereafter	Nov. 15
Identify control measures implemented to reduce and/or eliminate the discharge of trash and debris	Annually	Nov. 15
Review litter/trash control ordinances to determine need for revision	July 1, 2003	Nov.15, 2003
Determine need for additional debris control measures	July 1, 2003	Nov.15, 2003
VIII. MUNICIPAL INSPECTIONS OF CONSTRUCTION SITES: Develop an inventory of all construction sites	January 31, 2003 & updated by Sept. 30 annually thereafter	Nov. 15
IX. MUNICIPAL INSPECTIONS OF INDUSTRIAL FACILITIES: Develop an inventory of industrial facilities with business permits or other authorization that have potential of discharging pollutants to the MS4, provide copy of inspection database	July 1, 2003 & updated annually	Nov. 15
Identify the remaining industrial facilities that do not have business permits or other authorization	September 1, 2005 & updated annually	Nov. 15
X. MUNICIPAL INSPECTIONS OF COMMERCIAL FACILITIES: Develop an inventory of listed commercial facilities that have potential of discharging pollutants to the MS4, provide copy of inspection database	July 1, 2003 & updated annually	Nov. 15
XI. SEWAGE SPILLS, INFILTRATION INTO MS4 SYSTEMS FROM LEAKING SANITARY SEWER LINES, ANS SEPTIC SYSTEM FAILURES:		
Propose a mechanism to determine the effect of septic system failure on storm water quality	One Time	July 1, 2003
Propose a unified response mechanism to respond to any sewage spills	One Time	July 1, 2003
Review current oversight programs for portable	One Time	July 1, 2003

toilets to determine the need for any revision		
XII.A. NEW DEVELOPMENT (INCLUDING SIGNIFICANT RE-DEVELOPMENT): Establish a mechanism to ensure all construction projects and industrial sites filed NOI for coverage under the General Permit prior to issuance of local permits or approvals	One Time	October 15, 2002
Review and modify approval/permitting process to incorporate BMPs in the Guidelines for New Development and Redevelopment	One Time	September 1, 2002
Review planning procedure and CEQA document preparation process to ensure storm water-related issues are properly considered and addressed	One Time	February 15, 2003
Review and/or incorporate watershed protection principles and policies into the General Plan	July 1, 2004	Nov. 15, 2004
Review current grading/erosion control ordinances	One Time	September 1, 2003
Identify a new development site and propose study to evaluate the effectiveness of a selected BMP	One Time	Nov. 15, 2003
Review Guidelines for New Development and Redevelopment to determine the need for any revisions	One Time	July 1, 2003
XII.B. WATER QUALITY MANAGEMENT PLAN (WQMP) FOR RUNOFF (FOR NEW DEVELOPMENT/SIGNIFICANT RE-DEVELOMENT): Review existing BMPs for new development and submit revised WQMP for urban runoff from new developments/significant redevelopments	One Time	January 1, 2004
XIII. PUBLIC EDUCATION AND OUTREACH: Public awareness survey to determine effectiveness of current public and business education strategy	One Time	October 30, 2002
Propose a study for measuring changes in the public's knowledge and behavior as a result of the education program	One Time	January 15, 2003
Recommend any changes to the public and business education program	One Time	January 15, 2003
Develop public education material to encourage the	One Time	Sept. 15,

public to report illegal dumping from residential, industrial, construction, and commercial sites into public streets, storm drains and other waterbodies		2002
Develop BMP guidance for household use of fertilizer, pesticides, herbicides, and other chemicals, guidance for mobile vehicle maintenance, carpet cleaners, commercial landscape maintenance, and pavement cutting	One Time	July 1, 2003
Determine best method of establishing a mechanism(s) for providing educational and General Industrial Permit materials to businesses within jurisdiction	One Time	January 15, 2003
XIV. MUNICIPAL FACILITIES/ACTIVITIES: Complete assessment of flood control facilities to evaluate opportunities to configure and/or reconfigure channel segments to function as pollution control devices and optimize beneficial uses	September 1, 2003	Nov. 15, 2003
Develop list of BMPs for fire-fighting training, non-emegency firefighting activities, etc.	One Time	July 1, 2003
Develop and distribute to all permittees a BMP fact sheet to address public agency activities	October 1, 2002	Nov. 15, 2002
Develop and distribute BMP guidance for public agency, contract field operations and maintenance staff to provide guidance in appropriate pollution control measures, how to respond to spills, etc.	October 1, 2002	Nov. 15, 2002
Evaluation of efficiency and cost effectiveness of the available BMPs for litter control and develop recommendations for any needed improvements	July 1, 2003	Nov. 15, 2003
Identify areas not subject to street sweeping due to lack of continuous curb and gutter and evaluate their potential for impacting storm water quality	One Time	Nov. 15, 2003
Inspect and maintain at least 80% of drainage facilities on an annual basis, with 100% of facilities in a two-year period. Evaluate if inspection and maintenance schedule need to be increased.	Annually	Nov. 15
XVI. PROGRAM MANAGEMENT: Evaluate the management plan to determine need for revisions	By October 1, Annually	Nov. 15
XVII. FISCAL RESOURCES: Prepare and submit a	Annually	Nov. 15

unified fiscal analysis to the EO		
XIX. PERMIT EXPIRATION AND RENEWAL: **Submit** Report of Waste Discharge	180 days prior to expiration	October 28, 2006
MONITORING PROGRAM REQUIREMENTS: GIS-based mapping of drainage area information	One Time	July 1, 2003
Assessment of relative pollutant loading from different drainage areas to receiving waters	Dec. 1, 2003, One Time	Nov. 15, 2004
Evaluate effectiveness of selected BMPs in controlling pollutant loads	Dec. 1, 2003, Annually thereafter	Nov. 15, 2004
Submit bacteriological monitoring program	One Time	July 1, 2002
Submit integrated watershed monitoring program	One Time	July 1, 2003
REPORTING: Annual progress report	Annually	Nov. 15

Ordered by _____

Gerard J. Thibeault
Executive Officer
April 26, 2002

(April 9, 2002 Draft)

California Regional Water Quality Control Board

Santa Ana Region

3737 Main Street, Suite 500

Riverside, CA 92501- 3348

FACT SHEET

April 26, 2002 (Board Meeting date)

ITEM: **13**

SUBJECT: Waste Discharge Requirements for the San Bernardino County Flood Control District (SBCFCD), the County of San Bernardino, and the Incorporated Cities of San Bernardino County within the Santa Ana Region, Storm Water Runoff Management Program, San Bernardino County, Order No. R8-2002-0012 (NPDES No. CAS618036)

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 from 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 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) started regulating municipal storm water runoff in 1990.

The attached pages contain information concerning an application for renewal of waste discharge requirements and a National Pollutant Discharge Elimination System (NPDES) permit. Order No. R8-2002-0012, NPDES No. CAS618036, prescribes waste discharge requirements for urban storm water runoff from the cities and the unincorporated areas in San Bernardino County within the jurisdiction of the Santa Ana Regional Board. On September 1, 2000, the San Bernardino County Flood Control District (SBCFCD) and the County of San Bernardino, in cooperation with the cities of Big Bear Lake, Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa (hereinafter collectively referred to as permittees or dischargers), submitted NPDES Application No. CAS618036 (Report of Waste Discharge) for reissuance of their area-wide NPDES storm water permit. The permit renewal application was submitted in accordance with the requirements specified in the previous

NPDES storm water permit (Order No. 96-32, NPDES No. CA 618036), which expired on March 1, 2001. The permit application also follows guidance provided by the staff of the State Water Resources Control Board (State Board) and the Regional Water Quality Control Boards (Regional Boards).

On March 2, 2001, Order No. 96-32, NPDES No. CAS 618036, 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. R8-2002-0012 regulates discharges of urban storm water from the upper Santa Ana watershed to waters of the U.S., ultimately draining to 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. Urban runoff may contain pathogens (bacteria, viruses, protozoa), sediment, trash, fertilizers (nutrients, mostly compounds of nitrogen and phosphorus), oxygen-demanding substances (decaying and/or decomposable matter), pesticides (DDT, chlordane, diazinon, chlorpyrifos) heavy metals (cadmium, copper, chromium, 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 watersheds undergo urbanization, pervious surface area decreases, runoff volume and velocities increase, riparian habitats and wetland habitats decrease, 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, cause toxicity to marine organisms, and impact human health and the environment.

The United States Environmental Protection Agency (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 established a definite link between storm water runoff from urban areas and pollution in nearshore zones. A number of Orange County beaches were closed during the summer of 1999 and 2000 due to microbial contamination. During wet weather or storm conditions, discharges from the San Bernardino County areas may ultimately drain into the Pacific Ocean and can have an impact on Orange County beaches. 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 and their sources in urban runoff and lists some of the adverse impacts these pollutants could have on receiving waters.

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[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 Storm water 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.

Table 1[3]

Pollutants/Impacts of Urbanization

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 (DDT, diazinon, chlorpyrifos)	Urban runoff; residential, commercial, industrial, and farm use; agricultural runoff	Legacy pesticides (DDT, chlordane, dieldrin) have been banned; still persists in the environment; some of the other pesticide uses have been 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 (NRC, 1993a, 2000a).
Petroleum products (oil, grease, petroleum hydrocarbons, PAHs)	Runoff and atmospheric deposition from land activities; shipping and tanker operations; accidental spills; oil gas production activities; natural seepage; PAHs from internal combustion engines	Petroleum hydrocarbons can affect bottom organisms and larvae; spills affect birds, mammals and aquatic life. While oil pollution from ships, accidental spills, and production activities has decreased, diffuse inputs from land-based activities have not (NRC, 1985).
Radioactive isotopes	Atmospheric fallout, industrial and military activities	Bioaccumulation may pose human health risks where contamination is heavy.
Sediments	Erosion from farming, construction activities, forestry, mining, development; river diversions; 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.
Plastics and other debris	Boats, fishing nets, containers, trash, urban runoff	Entangles aquatic life or is ingested; degrades wetlands and 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 surfaces	Kills some temperature-sensitive species; displaces others.
Pathogens (bacteria, protozoa, viruses)	Sewage, urban runoff, livestock, wildlife, and discharges from boats.	Pose health risks to swimmers and consumers of seafood. Sanitation has improved, but standards have been raised (NRC 1999a).
Alien species	Fishery stocking, aquarists	Displace native species, introduce new diseases; growing worldwide problem (NRC 1996).

[3] Adapted from "Marine Pollution in the United States" prepared for the Pew Oceans Commission, 2001.

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 San Bernardino 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 which are discharged to municipal storm drain systems in San Bernardino County are tributary to various water bodies (inland surface streams, 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, hydropower generation, water contact recreation, non-contact water recreation, and sportfishing, warm freshwater habitat, cold freshwater habitat, preservation of biological habitats of special significance, wildlife habitat and preservation of rare, threatened or endangered species. The ultimate goal of this storm water management program is to protect the beneficial uses of the receiving waters.

IV. PROJECT AREA

The permitted area is delineated by the Santa Ana-Lahontan Regional Board boundary line on the north and northeast, the Santa Ana-Colorado River Basin Regional Board boundary line on the east, the San Bernardino-Riverside County boundary line on the south and southeast, the San Bernardino-Orange County boundary line on the southwest, and the San Bernardino-Los Angeles County boundary line on the west (see Attachment 1). The permittees serve a population of approximately 1.33 million, occupying an area of approximately 985 square miles. The latest figures estimated 384 miles of aboveground and 334 miles of below ground storm drain channels in the project area. Approximately seven percent (7%) of the San Bernardino County surface area 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 feeding operations. However, the CWA specifically excludes discharges from agricultural sources from regulations under this program. Areas of the County not addressed or which are excluded under the storm water regulations and areas not under the jurisdiction of the permittees are excluded from coverage under this permit. These areas or activities include the following:

- Federal lands and state properties, including, but not limited to, military bases, national forests, hospitals, schools, colleges and universities, and highways;
- Native American tribal lands;
- Open space and rural (non-urbanized) areas;
- Agricultural lands; and
- Utilities and special districts.

Discharges from the project area drain into the Santa Ana River. The watershed regulated under this Order is generally referred to as the Upper Santa Ana River Basin.

V. WATERSHED MANAGEMENT/UPPER SANTA ANA RIVER BASIN

To regulate and control storm water discharges from the San Bernardino County area to the San Bernardino County storm drain systems, an area-wide approach is essential. The entire storm drain system in San Bernardino County is not controlled by a single entity; the SBCFCD, several cities, and the State Department of Transportation

(Caltrans) manage the system. In addition to the cities and the SBCFCD, there are a number of other significant contributors of urban storm water runoff to these storm drain systems. These include: large institutions, such as the State University system; schools; hospitals; federal facilities, such as military installations; State agencies, such as Caltrans; water and wastewater management agencies, such as San Bernardino Valley Municipal Water District and Inland Empire Utilities Agency; the National Forest Service; and state parks. The management and control of the entire flood control system cannot be effectively carried out without the cooperation and efforts of all these entities. Also, it would not be meaningful to issue a separate storm water permit to each of the entities within the permitted area whose land/facilities drain into the county storm drain systems. The Regional Board has concluded that the best management option for the San Bernardino County area is to issue an area-wide storm water permit. Some of the storm drain systems in the project area discharge into storm drain systems controlled by other entities, such as the County of Riverside, the County of Orange, and the County of Los Angeles.

Cooperation and coordination among all the stakeholders are essential for efficient and economical management of the watershed. It is also critical to manage non-point sources at a level consistent with the management of urban storm water runoff in a watershed in order to successfully prevent or remedy water quality impairment. Regional Board staff will facilitate coordination of monitoring and management programs among the various stakeholders, when 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 to be developed under the TMDL process. 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 Santa Ana River Watershed in San Bernardino County can be subdivided into the following sub-watersheds:

A. UPPER SANTA ANA RIVER WATERSHED

The Upper Santa Ana River Watershed includes the upper reaches of the Santa Ana River (Reaches 4, 5 and 6) and its tributaries.

1. Reach 4 of the Santa Ana River: Reach 4 of the Santa Ana River is the portion of the River from Mission Boulevard bridge in Riverside to the San Jacinto fault (Bunker Hill Dike) in San Bernardino. There is perennial flow in this reach of the River, mostly from the upstream

discharges of treated municipal wastewater. Much of this reach is also maintained as a flood control facility. This reach of the River is posted to warn against water contact recreation, due to microbial problems. The wastewater discharges from the sewage treatment plants to this reach of the River are tertiary treated and are not expected to be sources of microbial contamination. This Order requires the permittees to investigate other sources, such as the transient population living along this stretch of the River, wild life, etc., and storm water and dry weather urban runoff to determine the cause of microbial contamination along Reach 4 of the River. Lytle Creek and Cajon Creek are the other major tributaries to this reach of the River.

Other major problems along this reach of the River include the buildup of total dissolved solids (TDS, dissolved salts or minerals) and nitrogen, largely in nitrate form. The buildup of TDS and nitrates can impact downstream beneficial uses, including reclamation. The buildup of TDS and nitrate is mostly due to agricultural uses, including dairies and the application of fertilizers, municipal and industrial wastewater discharges, and reuse and recycling operations. A complex set of programs and policies are included in the Basin Plan to address this problem, including a water supply plan, a wastewater management plan, and a groundwater management plan. Other elements of the Basin Plan include the non-point source program and the storm water program. The Basin Plan identifies the Statewide General Permits and the MS4 permits as the regulatory tools for storm water management in the Basin.

2. Reach 5 of the Santa Ana River: This reach of the River extends from the San Jacinto Fault in San Bernardino to the Seven Oaks Dam. Most of this reach of the River is maintained as a flood control facility and is dry, except during storm flows. Major tributaries to this reach include San Timoteo Creek, City Creek, Plunge Creek, and Warm Creek. These tributaries are usually dry, except for the discharge of treated wastewater from Yucaipa Valley Water District to San Timoteo Creek and from the City of Beaumont to Coopers Creek (a tributary to San Timoteo Creek). These wastewater discharges flow for a short distance and percolate into the ground. No major water quality problems have been identified in this stretch of the River or its tributaries.

3. Reach 6 of the Santa Ana River: This reach includes the River upstream of Seven Oaks Dam. Major tributaries include Bear Creek, Forsee Creek, and Rattlesnake Creek. Flows consist mostly of snowmelt and storm water runoff. Water quality in this reach of the River tends to be very good.

B. CHINO BASIN WATERSHED

The Chino Basin Watershed covers about 405 square miles and lies largely in the southwestern corner of San Bernardino County, and part of western Riverside County. This permit only covers those portions of the watershed

that are within San Bernardino County under the jurisdiction of this Board. Surface drainage is generally southward, from the San Gabriel Mountains toward the Santa Ana River and Prado Flood Control Basin. Major surface waterbodies in the Chino Basin Watershed include:

- San Antonio Creek
- Chino Creek
- Cucamonga Creek
- Day Creek, and
- Deer Creek

Although it was originally developed as an irrigated agricultural area, and then into dairies, the watershed is being steadily urbanized. The municipalities under this permit in the Chino Basin Watershed include Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, Rialto, and Upland. The Chino-Corona Agricultural Preserve has the highest concentration of dairy animals in the nation. The ground and surface water quality in the area have been adversely impacted by these dairy operations.

The dairies within the Region are regulated under the Board's General Dairy Permit, Order No. 99-11, NPDES No. CAG018001. The General Dairy Permit allows discharge of storm water from dairies only for storms exceeding a 24-hour 25-year frequency. The area lacks appropriate flood control facilities, and runoff from upstream urbanized areas often inundates some of the dairies in the area, even during light or moderate storm and runoff events. This causes dairy waste containment facilities to fail and overflow into surface drainage facilities. This overflow causes nutrient, TDS, TSS, and microbial problems in the receiving waters. The San Bernardino and Riverside County Flood Control Districts, in cooperation with local municipalities, are coordinating an effort to construct flood control facilities in the area.

Groundwater problems (mostly TDS and nitrate) in the Chino Basin Watershed are being addressed through a comprehensive watershed management plan. As part of this plan, desalters are being developed to pump and treat contaminated groundwater in the southern part of Chino Basin. One desalter has been built, and a second one is being designed. A co-composting facility owned by the Inland Empire Utilities Agency accepts manure from Chino Basin dairies. The co-composting facility is required to distribute the products outside of the Chino Basin Watershed to reduce the re-introduction of TDS and nutrients to this watershed from the land application of the composted product.

C. <u>BIG BEAR LAKE WATERSHED</u>

The Big Bear Lake watershed is located in the San Bernardino Mountains. Major waterbodies in this watershed include:

- Big Bear Lake
- Baldwin Lake (currently a dry lakebed)

- Stanfield Marsh
- Shay Meadows
- Rathbone (Rathbun) Creek
- Summit Creek
- Grout Creek

Big Bear Lake is a high mountain reservoir occupying a relatively small, east to west oriented basin. The basin supports a large number of recreational activities. Lake recreational activities include fishing, swimming, boating and water skiing. Areas adjacent to the lake are used for camping, skiing, hiking, equestrian trails and other outdoor activities. Water in the Lake is also used for municipal supplies. A number of water quality problems have been identified for the Lake.

The 1998 303(d) list of impaired water bodies (see below) designated the following waterbodies in this sub-watershed as impaired: Big Bear Lake (nutrients, copper, mercury and siltation); Grout Creek (metals and nutrients); Knickerbocker Creek (metals and pathogens); Summit Creek (nutrients); and Rathbone Creek (nutrients and siltation). The problem pollutants have been identified as coming from resource extraction activities, urban runoff, snow skiing activities, construction and land developments, and non-point sources. In conjunction with local stakeholders, work is underway to develop TMDLs for these pollutants. The TMDLs are expected to be complete by 2004/2005.

2. CWA SECTION 303(d) LIST AND TMDLS:

Pursuant to Section 303(b) of the CWA, the 1998 water quality assessment identified a number of water bodies as impaired. These are waterbodies where the designated beneficial uses are not met and the water quality objectives are being violated. The impaired waterbodies in San Bernardino County within the Santa Ana Regional Board's jurisdiction are listed in Table 2 and shown on Attachment 1 of the permit.

Table 2

CLEAN WATER ACT SECTION 303(D) LISTED WATERBODIES & TMDL SCHEDULE

Waterbody	Hydro Unit	Size Affected	Pollutant Stressor	Source	Priority	TMDL Schedule	Permittees
Big Bear Lake	801.710	2970 acres 2970 acres 2970 acres 2970 acres 2970 acres 2970 acres 2970 acres 2970 acres	Copper Mercury Metals Noxious aquatic plants Nutrients Sedimentation/Siltation	Resource Extraction Resource Extraction Resource Extraction Construction/Land development Construction/Land development Snow Skiing Activities Construction/Land development Snow Skiing Activities	Medium Medium Medium Medium Medium Medium Medium Medium	01/02 – 01/05	City of Big Bear Lake County of San Bernardino
Summit Creek	801.710	1 mile	Nutrients	Construction/Land Development	Medium	01/02 – 01/05	City of Big Bear Lake, County of San Bernardino
Knickerbocker Creek	801.710	2 miles 2 miles	Metal Pathogens	Unknown Non-point Source Unknown Non-point Source	Medium	01/03 – 01/05	City of Big Bear Lake, County of San Bernardino
Grout Creek	801.720	2 miles 2 miles	Metal Nutrients	Unknown Non-point Source Unknown Non-point Source	Medium	01/02 – 0105	City of Big Bear Lake, County of San Bernardino
Rathbone Creek	801.720	2 miles 2 miles	Nutrients Sedimentation/Siltation	Snow Skiing Activities Unknown Non-point Source	Medium	01/02 – 01/05	City of Big Bear Lake, County of San Bernardino
Mountain Home Creek, East Fork	801.700	1 mile	Pathogens	Unknown Non-point Source	Low	01/08 – 01/11	County of San Bernardino
Mountain Home Creek	801.580	4 miles	Pathogens	Unknown Non-point Source	Low	01/08 – 01/11	County of San Bernardino
Mill Creek (Prado Area)	801.250	4 miles	Nutrients Pathogens Suspended Solids	Agriculture, Dairies Dairies Dairies	Medium Medium Medium	01/00 – 01/05 01/00 – 01/05 01/00 – 01/05	Ontario, Rancho Cucamonga, Upland, SBCFCD, County of San Bernardino
Mill Creek, Reach 1	801.580	5 miles	Pathogens	Unknown Non-point Source	Low	01/08 –01/11	Redlands, SBCFCD, County of San Bernardino
Mill Creek, Reach 2	801.580.	8 miles	Pathogens	Unknown Non-point Source	Low	01/08 – 01/11	SBCFCD, County of San Bernardino
Santa Ana River, Reach 4	801.270	12 miles	Pathogens	Non-point Source	Low	01/08 – 01/11	Colton, Rialto, Highland, Grand Terrace, Redlands, City of San Bernardino, SBCFCD, County of San Bernardino
Lytle Creek	801.400	18 miles	Pathogens	Unknown Non-point Source	Low	01/08 – 01/11	City of San Bernardino, SBCFCD, County of San Bernardino
Chino Creek, Reach 1	801.210	2 miles	Nutrients Pathogens	Agriculture Dairies Dairies Urban Runoff/ Storm Sewers	Medium Medium	01/00 – 01/05	Chino, Chino Hills, SBCFCD, County of San Bernardino
Chino Creek, Reach 2	801.210	10 miles	High Coliform Count	Unknown Non-point Source	Low	01/08 – 01/11	Chino, Chino Hills, SBCFCD, County of San Bernardino
Prado Park Lake	801.210	60 acres	Nutrients Pathogens	Non-point Source Non-point Source	Low Low	01/08 – 01/11 01/08 – 01/11	Chino, Chino Hills, County of San Bernardino
Cucamonga Creek, Valley Reach	801.210	13 miles	High Coliform Count	Unknown Non-point Source	Low	01/08 – 01/11	Ontario, Rancho Cucamonga, Upland, SBCFCD, County of San Bernardino

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 are being developed for all pollutants identified in Table 2. However, this permit may be reopened to include TMDL implementation, if other implementation methodologies are not effective.

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 requested areawide NPDES permits for storm water runoff. On August 29, 1990, the Regional Board issued Order No. 90-136 to the San Bernardino County permittees (first term permit). In 1996, the Board adopted Order No. 96-32 (second term permit). First and second term permits included the following requirements:

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).
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). The 1993 DAMP included a number of best management practices (BMPs) and a very extensive public education program. The monitoring programs for the first and second term permit included 10 monitoring stations within streams and flood control channels. The findings and conclusions from these monitoring stations and monitoring programs of other municipal permittees (Riverside County, Orange County 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 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 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:

1. Interagency Agreements and Coordination: Established a program management structure through an interagency Implementation Agreement and established a Management Committee as an overall decision making body with designated representatives from each of the permittees. Participated in regional monitoring programs and focused special studies/research programs. Worked with other local and State agencies 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 Model Storm Drain Ordinance and Implementation Plan and Model Guidelines for New Development and Redevelopment; developed the Municipal Activities Pollution Prevention Strategy (MAPPS) which contains a complete list of BMPs for corporate yard activities and Criteria for MS4 Inspections.

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 review and revision of CEQA Process and General Plan elements to address storm water quality issues, litter control measures, street sweeping frequencies and methods, public agency activities and facilities, illegal discharges and illicit connections to the MS4 systems, and existing monitoring programs. A public survey was conducted to determine the public's understanding of storm water pollution and prevention, and the effectiveness of the Storm Water Program's campaigns.

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 industrial dischargers were notified of the storm water regulatory requirements. Gas/service stations were targeted and a fact sheet developed with BMP information. Business Recognition Programs were instituted as incentives for storm water management. Fact sheets, brochures, and flyers were developed and distributed to residents. The permittees also participated in radio and television advertisements, presentations at schools and participation in regional events to increase awareness of pollution prevention among the general public. A 24-hour hotline was established for reporting illegal dumping or any violations of the storm water program as well as to provide information regarding the storm water program. A website was completed that highlights the storm drain system and storm water pollution prevention services offered by the San Bernardino County Storm Water Program,

BMPs, "Adopt-A-Gutter" program, and contacts/links to other related resources.

5. Public Agency Training: Training was provided to public agency employees to implement New Development Guidelines and Public Works BMPs, to conduct investigations of reported water quality problems, and 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: Modified flood control facilities by channel stabilization, creation of a sediment basin and expansion of an existing basin, eliminated illegal connections and permitted and/or documented illicit connections to the MS4s.

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, due to 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, the amount of used oil collected, the amount of debris removed, etc.

The water quality monitoring data 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 US. It is expected that continuation of these programs and policies will eliminate and/or control pollutants in storm water runoff.

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 management plan (ROWD) 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 ROWD

The NPDES permit renewal application describes the area-wide Storm Water Management Program for the third permit term and it includes programs and policies the permittees are proposing to implement during the third term permit. The 2000 ROWD is the principal guidance document for urban storm water management programs in San Bernardino County and includes the following major components:

1. Provides a framework for the program management activities and municipal storm water management program development.

2. Provides 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. Ensures controls for new developments and significant redevelopments.
6. Ensures that construction sites implement appropriate pollution control measures.
7. Ensures that industrial sites are in compliance with storm water regulations.
8. Includes programs and policies to eliminate illegal discharges and illicit connections to the MS4s.
9. Includes continued 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 improve control of pollutants in storm water runoff from storm water conveyance 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 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 (MEP) 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 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 is 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 San Bernardino County's urban storm water management program and the proposed programs and policies for the next five years (third term permit). This Order recognizes

the performance commitments made by the permittees for the third permit term in implementing the storm water regulations. Therefore, this Order is less prescriptive compared to some of the other MS4 NPDES permits for urban runoff issued by other Regional Boards. However, it hopes to achieve the same or better water quality benefits because of the programs and policies already being implemented or proposed for implementation.

The major requirements include: 1) Discharge prohibitions; 2) Receiving water limitations; 3) Adequate legal authority; 4) Prohibition on illicit connections and illegal discharges; 5) Inspection activities by the municipalities; 6) Sewage spills, sanitary sewer line leaks, septic system failures and portable toilet discharges; 7) New development/re-development requirements; 8) Public and business education; 9) Municipal facilities and activities; 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, a separate Waste Discharge Requirement 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 U.S. 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. **LEGAL AUTHORITY**

Each permittee has 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 cleanup

costs from the responsible party. In the event of egregious or repeated violations, the option exists for 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 referrals to the District Attorney. 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.

4. 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 MS4s do not become a source of pollutants in receiving waters.

5. MUNICIPAL INSPECTION PROGRAM

Inspections by the municipalities of construction, industrial, and commercial activities within their jurisdiction are required, in order to control the discharge of pollutants entering the MS4 system. The municipalities are required to inventory companies and sites in the above categories, prioritize those companies and sites with respect to their threat to water quality and their proximity to sensitive receiving waters, and perform regular inspections to ensure compliance with local ordinances. While initial observations of non-compliance may result in educational type of enforcement, repeated non-compliance is expected to result in more disciplinary forms of enforcement, such as monetary penalties, stop work orders, or permit suspension or revocation.

During the second term permit, the permittees focused on identifying industrial and commercial facilities in each permittee's jurisdiction and on developing education and outreach materials. The permittees also developed and implemented a storm water inspection program that utilized existing inspection programs to check for storm water elements. This Order requires the permittees to prioritize these facilities by a specified date, based on threat to water quality, and prescribes a minimum inspection frequency for facilities based on this prioritization scheme.

This Order requires the permittees to continue their inspection programs and enforce local ordinances for storm water violations at all construction sites, including those covered under the Statewide General Construction Permit. This Order further requires the permittees to prioritize these sites by a specified date, based on threat to water quality, and prescribes a minimum inspection frequency for these sites based on this prioritization scheme.

6. SEWAGE SPILLS, SANITARY SEWER LINE LEAKS, SEPTIC SYSTEM FAILURES AND PORTABLE TOILET DISCHARGES

The permittees are required to determine if exfiltration from leaking sanitary sewer lines, sewage spills from blocked sewer lines, leaks and spills from sewer lines, improper use of portable toilets, and failing septic systems are causing or contributing to urban storm water pollution problems in their jurisdictions. If any of these is determined to be a problem, the permittees are required to develop and implement a plan to address these problems. In certain areas, the permittees may not have any control over sanitary sewer systems. In such cases, the permittees are required to work with the sanitation district for the area to develop acceptable solutions to these problems.

The permittees have already developed a sewage spill response policy and, where appropriate, entered into agreements with the sanitation districts for responding to sewage spills in a timely manner.

The Regional Board may consider issuing a separate Waste Discharge Requirement Order to address sanitary sewer overflows.

7. NEW DEVELOPMENT AND SIGNIFICANT REDEVELOPMENT

During the second term permit, the permittees developed Guidelines for New Development and Redevelopment. 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 number of methodologies. The permittees/project proponents may propose BMPs based on a watershed approach, establish a storm water pollution prevention fund for such regional solutions, or propose 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 December 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).

8. 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 programs and has targeted various groups including businesses, industry, developers, utilities, environmental groups, institutions, homeowners, school children, and the general public. The permittees have developed a number of educational materials, have 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.

9. MUNICIPAL 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 develop and implement a Municipal Activities Pollution Prevention Strategy to address public agency facilities and activities that are not regulated under the State's General Industrial Activities Storm Water Permit. For the third term permit, the permittees are proposing to regroup the program elements into seven groups: (1) Sewage Sytems; (2) Maintenance Areas and Materials Storage Areas; (3) Landscape Maintenance; (4) Storm Drain Systems; (5) Streets and Roads; (6) Municipal Activities Pollution Prevention training; and (7) Training. Performance commitments are included in the ROWD for each of these seven groups. These commitments and other requirements to ensure water quality protection are included in this Order.

10. MONITORING AND REPORTING REQUIREMENTS

During the first and second term permits, the permittees conducted system characterization, BMP evaluation, and storm water discharge, and receiving water monitoring. These early programs focused on identifying pollutants, estimating pollutant loads, tracking compliance with water quality objectives, and identifying sources of pollutants. The San Bernardino County monitoring programs, as well as other monitoring programs nationwide, have shown 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 are a number of pollutants in urban storm water runoff. A definite link between pollutants in urban runoff and beneficial use impairments has been established only in a few cases.

In 2000, the permittees re-evaluated their monitoring program and proposed a revised monitoring program. The overall goal of the proposed Monitoring Program is to provide information in support of effective implementation of the areawide storm water program. The monitoring program goals are to evaluate BMP effectiveness, identify key pollutants of concern and their sources, evaluate impacts from urban runoff sources to local receiving waters, and participate in regional monitoring and research programs.

To accomplish these goals, the monitoring program focuses on the following areas:

1. Characterization and mapping of drainage areas including identification of pollutants of concern;
2. BMP effectiveness studies to evaluate the usefulness of sedimentation basins and other available technologies for storm water pollution prevention;
3. Receiving water monitoring of selected sites for key chemical and physical constituents, focusing on sites upstream and downstream of the urbanized area on the Santa Ana River and Cucamonga Creek;

4. Additional monitoring to provide bacteriological data in cooperation with Riverside County;
5. Source identification to identify sources of pollutants of concern; and
6. Data analysis using statistical methods.

Historical wet weather monitoring has shown elevated pollutant concentrations at monitoring Sites 2, 3 and 5. Monitoring Site 2 is located 400 feet south of Freeway 60, west of Archibald Avenue, on the east side of Cucamonga Creek Channel, in the City of Ontario. Land use within this drainage area is primarily commercial and industrial. Site No. 3 is located at Hellman Avenue, between Pine Avenue/Schleisman Road and Chino-Corona Road/Chandler Street, 75 feet east of Hellman Avenue bridge on the south side of Cucamonga Creek Channel near the City of Chino on the San Bernardino County/Riverside County line. This site drains the entire Cucamonga Creek, however the area between Site No. 2 and this site is mainly agricultural. Site No. 5 is located in the Hunts Lane access road north of Hospitality Lane, in a manhole located in the asphalt parking lot behind the Souplantation Restaurant in the City of San Bernardino. This site receives flows from predominantly restaurants mixed with businesses. Using wet weather monitoring data from 1994-99, the 2000 ROWD identified Site 5 to have the highest average concentration for BOD, copper, zinc, and TSS while Site 3 has the highest average concentrations for nitrate and phosphorus. First flush data from the 1999-2000 monitoring events showed elevated levels consistent with prior years' data for Sites 2, 3, and 5.

The permittees are required to continue first flush monitoring at storm drain monitoring Sites 2, 3, and 5 and focus source identification and control efforts at these locations pending approval of an integrated watershed monitoring program.

The permittees also participate in a number of other regional monitoring programs, such as the Southern California Coastal Water Research Project's (SCCWRP) Storm Water Monitoring / Research Cooperative 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 integrated watershed monitoring program will identify data gaps from previous and other monitoring efforts, aim to attain the above-mentioned objectives and will incorporate statewide requirements for municipal storm water monitoring programs.

X. WATER QUALITY BENEFITS/COST ANALYSIS/FISCAL ANALYSIS

There are direct and indirect benefits from clean beaches, clean water, and 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 meet 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 lakes and beaches and other water recreational facilities also attract tourists.

The true magnitude of the urban runoff problem is still elusive and any cost estimate for cleaning up urban runoff would be premature short of end-of-pipe treatments. 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 are available.

The area-wide program is funded by the permittees. The principal permittee prepares an annual budget for the Management Committee. The principal permittee allocates 95 percent of the approved budget costs to the co-permittees based on percentage calculated using the cost allocation formula defined in the Implementation Agreement. The area-wide program 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; responding to Water Code Section 13267 requests; budget and other program documentation; and coordination of consultant studies, co-permittee meetings, and training seminars. For the next permit term, the projected average annual area-wide budget is about $650,000. The overall costs increased from $2.50M in 1996-2001 to $3.25M for the next permit term.

The permittees identified the following budget for Fiscal Year (2001/02):

EXPENDITURE ITEMS	AMOUNT ($)	PERCENTAGE
Annual NPDES Permit Fee	10,000	1.25
Monitoring Program	150,000	18.75
Public Education Program	350,000	43.75
Consultant Costs	50,000	6.25
Administration	170,000	21.25
Participation in Statewide NPDES Issues	40,000	5.00
Contingency	30,000	3.75
Total	800,000	100.00

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 the 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, thereby improving protection for the beneficial uses of waters of the United States. 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 WORKSHOPS

The Regional Board recognizes the significance of San Bernardino County's Storm Water/Urban Runoff Management Program and will conduct, participate, and/or assist with any workshop during the term of this permit to promote and discuss the progress of the storm water management program. The first public workshop regarding this draft Order was conducted at the September 26, 2001 Board meeting held at the City Council Chambers of Corona. The second public workshop was conducted at the January 23, 2002 Board meeting, also held at the City Council Chambers of Corona. Persons wishing to be included in the mailing list for any of the items related to this permit may register their name, mailing address and phone number with the Regional Board office at the address given below.

XIII. PUBLIC HEARING

The Regional Board will hold a public hearing regarding the proposed waste discharge requirements at the April 26, 2002 Board meeting to be held at the City Council Chambers of Corona, 815 W. Sixth Street, Corona. Further information regarding the conduct and nature of the public hearing concerning these waste discharge requirements may be obtained by writing or visiting the Santa Ana Regional Board office, 3737 Main Street, Suite 500, Riverside, CA 92501-3339. This and other information are also available at the website at: www.swrcb.ca.gov/rwqcb8.

XIV. INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Mr. Muhammad Bashir at (909) 320-6396. 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 10:00 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 name, 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.

XVI. RECOMMENDATIONS

Adopt Order No. R8-2002-0012, NPDES No. CAS618036, as presented.

In addition to the dischargers, comments were solicited from the following agencies and/or persons:

U.S. Environmental Protection Agency - Terry Oda/Eugene Bromley, Permit Issuance Section
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 - Jorge Leon/Elizabeth Miller Jennings, 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) - John Short
California Regional Water Quality Control Board, San Francisco Bay Region (2) - Dale Boyer
California Regional Water Quality Control Board, Central Coast Region (3) - Jennifer Biting
California Regional Water Quality Control Board, Los Angeles Region (4) - Wendy Philips
California Regional Water Quality Control Board, Central Valley Region (5) - George D. Day
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, Lahonton Region (6SLT), South Lake Tahoe - Mary Fiore-Wagner
California Regional Water Quality Control Board, Lahonton 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
State Department of Fish and Game - Long Beach
State Department of Health Services - San Bernardino
State Department of Parks and Recreation
South Coast Air Quality Management District, Diamond Bar
Orange County Environmental Management Agency, Environmental Resources Division - Christopher CromptonKaren Ashby Orange County Environmental Management Agency, Department of Public Works, Flood Programs - Herb Nakasone
San Bernardino County Flood Control District - Naresh Varma
Caltrans, District 8, San Bernardino - Paul Lambert
Southern Pacific Railroad
Atchison, Topeka & Santa Fe Railway Company
U.S. Department of the Air Force, March Air Force Base
Camp Dresser and McKee - Jeff Endicott
Building Industry Association - Tim Piasky
L.A. County Department of Public Works - Mustafa Ariki

U.S. Department of Agriculture - Forest Services, San Bernardino County National Forest

Environmental Organizations
Sierra Club, San Gorgonio Chapter
Natural Resources Defense Council (NRDC) - David Beckman/Heather Hoecherl
Tri-County Conservation League - Press Enterprise - Gary Polakovic
Santa Ana Watershed Project Authority - Joseph Grindstaff
Orange County Water District - Bill Mills
Metropolitan Water District - George Muse
Western Municipal Water District - Don Harriger
San Bernardino Valley Municipal Water District
Southern California Association of Governments, Los Angeles
Inland Empire West Resource Conservation District - General Manager
Big Bear Municipal Water District - General Manager
Inland Empire Utilities Agency - General Manager
Cucamonga County Water District - General Manager
East Valley Water District - General Manager
Monte Vista Water District - General Manager
West San Bernardino County Water District - Butch Araiz
Yucaipa Valley Water District - General Manager

Hospitals (Administrator)
Bear Valley Community Hospital
Chino Community Hospital
Doctors Hospital
Kaiser Foundation Hospital
Loma Linda Community Hospital
Loma Linda University Medical Center
Mountains Community Hospital
Ontario Community Hospital
Patton State Hospital
U.S. Department of Veterans Affairs - Memorial Veterans Medical Center
Redlands Community Hospital
St. Bernardine Medical Center
San Antonio Community Hospital
San Bernardino Community Hospital
San Bernardino County Hospital

Universities and Colleges (Chancellor)
California State University - California State University San Bernardino
San Bernardino Community College District - Chaffey College Campus
San Bernardino Community College District - Crafton Hills College Campus
San Bernardino Community College District - San Bernardino Valley College Campus
University of Redlands
Loma Linda University

School Districts (Superintendent)
Alta Loma Elementary School District
Bear Valley Unified School District
Central Elementary School District
Chaffey Joint Union High School District
Chino Unified School District
Colton Joint Unified School District
Cucamonga Elementary School District
Etiwanda Elementary School District
Fontana Unified School District
Mountain View Elementary School District
Mt. Baldy Joint Elementary School District
Ontario-Montclair Elementary School District
Rialto Unified School District
Rim of the World Unified School District
Redlands Unified School District
San Bernardino City Unified School District
Upland Unified School District
Yucaipa Joint Unified School District

Permittees
City of Big Bear Lake - Brian Gengler
City of Chino - David Crosley
City of Chino Hills - John Mura
City of Colton - Kathy Kivley
City of Fontana - Curtis Aaron
City of Grand Terrace - John Donlevey
City of Highland - Larry Williams
City of Loma Linda - Dennis Barton
City of Montclair - Mario Orioli
City of Ontario - Glen Stott
City of Rancho Cucamonga - Bob Zetterberg
City of Redlands - Tom Fujiwara
City of Rialto - Bruce Cluff
City of San Bernardino - Michael Grubbs
City of Upland - Steve Gapuzan
City of Yucaipa - Fred Hawkins
San Bernardino County Transportation/Flood Control Department - Naresh Varma
San Bernardino County - Jim Squire

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SANTA ANA REGION

3737 Main St, Suite 500, Riverside, CA 92501-3348
(951) 782-4130 • Fax (951) 781-6288
http://www.waterboards.ca.gov/santaana

ORDER NO. R8-2010-0036
NPDES NO. CAS618036

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT, THE COUNTY OF SAN BERNARDINO, AND THE INCORPORATED CITIES OF SAN BERNARDINO COUNTY WITHIN THE SANTA ANA REGION

AREA-WIDE URBAN STORM WATER RUNOFF MANAGEMENT PROGRAM

The following Dischargers (Table 1) are subject to waste discharge requirements as set forth in this Order:

Table 1. Municipal Permittees

Principal Permittee	San Bernardino County Flood Control District (SBCFCD)	
Co-Permittees	1. County of San Bernardino	9. City of Loma Linda
	2. City of Big Bear Lake	10. City of Montclair
	3. City of Chino	11. City of Ontario
	4. City of Chino Hills	12. City of Rancho Cucamonga
	5. City of Colton	13. City of Redlands
	6. City of Fontana	14. City of Rialto
	7. City of Grand Terrace	15. City of San Bernardino
	8. City of Highland	16. City of Upland
		17. City of Yucaipa

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 Quality Control Board on:	**January 29, 2010**
This Order shall become effective on:	**January 29, 2010**
This Order shall expire on:	**January 29, 2015**
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a major discharge.	
The Discharger shall 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. R8-2002-0012 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Dischargers shall comply with the requirements in this Order.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that this Order 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 Permittees listed in Table 1, above, owns and/or operates storm water and urban runoff conveyance systems, including flood control facilities. These conveyance systems are commonly referred to as municipal separate storm sewer systems (MS4s[1]) or storm drains, through which storm water and urban runoff are discharged into waters of the United States (Waters of the U.S.) that are located within the Santa Ana Region. 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 an MS4 and a water of the U.S. The primary purpose for which these MS4s were constructed was for flood control to minimize threat to public safety and property damage. 40 CFR 122.26(b) categorizes MS4s as follows: (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; (3) an MS4 which is a significant contributor of pollutants to waters of the United States; or (4) an MS4 owned and/or operated by a small municipality that is interrelated to a medium or large municipality. Urban Runoff[2] from these MS4 systems must be regulated under a National Pollutant Discharge Elimination System (NPDES) permit as per Section 402(p) of the federal Clean Water Act (CWA).

B. This Order regulates the discharge of pollutants (as defined in Attachment 4, Glossary) in Urban Runoff from anthropogenic (generated from non-agricultural human activities) sources from MS4s that are either under the jurisdiction of the Permittees, and/or where Permittees have MS4 maintenance responsibility, or have authority to approve modifications of the MS4s. Urban Runoff includes those discharges from residential, commercial, industrial and construction areas within the permitted area and excludes discharges from feedlots, dairies, and farms or other agricultural activities. The Permittees have jurisdiction over and/or maintenance responsibility for storm water conveyance systems within San Bernardino County. The Permittees lack legal jurisdiction over storm water discharges into their systems from State and federal facilities, e.g., schools and hospitals, utilities 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 such facilities and/or

[1] A MS4 (municipal separate storm sewer system) system is any conveyance or a system of conveyances designed to collect and transport storm water which is not part of a Publicly Owned Treatment Works (i.e., not a combined sewer).

[2] Urban runoff is defined as all flows in a storm water conveyance system and consists of the following components: (1) storm water (wet weather flows) and (2) authorized non-storm water discharges

discharges. The Regional Water Board will coordinate with these entities to implement programs that are consistent with the requirements of this Order. 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. The Regional Board may also consider such facilities for coverage under its NPDES permitting scheme pursuant to USEPA Phase II storm water regulations.

C. 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 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 requirements[3] for the Permit Area.

D. Certain activities that generate pollutants present in storm water runoff may be beyond the ability of Permittees to prevent or eliminate. Examples of these include, but are not limited to: emissions from internal combustion engines, brake pad and tire wear, atmospheric deposition, bacteria from wildlife (including feral dogs and cats) or from bacterial resuscitation or reactivation from treated waters or growth of bacteria in the environment (such as in sediments, surface water, or other substrate), 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.

E. The Permittees serve a population of approximately 1.5 million[4] (75% of the County population), occupying an area of approximately 620 square miles[5]. The permitted area is shown on Attachment 1.

F. The Permittees' MS4 systems include an estimated 378 miles of above-ground channels and 485 miles of underground storm drain channels, for a total of 863 miles within the permitted area. Approximately seven percent (7%) of the San Bernardino County area drains into water bodies within this Regional Board's jurisdiction. This Order regulates urban and storm water runoff from areas within the Santa Ana Regional Board's jurisdiction. Approximately 50% of the remaining San Bernardino County drainage areas are within the jurisdiction of the Lahontan Regional Board. Urban and storm water runoff from those areas is regulated by the Lahontan Regional Board. The other 43% is within the jurisdiction of the Colorado River Basin Regional Board. The Colorado River Basin Regional Board regulates urban and storm water runoff from those areas. As indicated above, most of the urbanized areas of San Bernardino County are located within the Santa Ana Regional Board's jurisdiction.

[3] The State General Construction Permit Order No. 2009-0009-DWQ Section XIII.
[4] Per 2006 Report of Waste Discharge (ROWD).
[5] Per 2006 ROWD.

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.
2. The discharge of Urban Runoff from the San Bernardino County areas within the Santa Ana Region is currently regulated under Order No. R8-2002-0012, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS 618036. Order No. R8-2002-0012 expired on April 27, 2007 and was administratively extended until adoption of this Order in accordance with Title 23, Division 3, Chapter 9, §2235.4 of the California Code of Regulations.
3. The Permittees jointly submitted a Report of Waste Discharge (ROWD) on October 26, 2006, as application to renew their NPDES permit. To effectively carry out the requirements of this Order, the Permittees have agreed that the San Bernardino County Flood Control District (SBCFCD) will continue as the Principal Permittee and the County and the 16 incorporated cities will continue as the Co-Permittees.
4. The ROWD proposed revisions to the Municipal Storm Water Management Plan (MSWMP) that includes performance commitments for each program element, letters of intent from each of the eighteen Permittees listed in Table 1, and proposed activities to be conducted during the fourth term permit. The MSWMP incorporated a number of other documents by reference. The ROWD, the letters of intent, the MSWMP and the documents referenced therein are hereby made enforceable elements of this Order. The ROWD included: (a) a summary of accomplishments; (2) discharge characterization; (3) program effectiveness analysis; and (4) recommendations for program improvements.
5. This Order, Order No. R8-2010-0036 (hereinafter the Order or the Permit), renews NPDES Permit No. CAS618036 that was first issued on October 19, 1990 (Order No. 90-136, first-term permit) and renewed on March 8, 1996 (Order No. 96-32, second-term permit) and October 25, 2002 (Order No. R8-2002-0012, third-term permit). Order No. R8-2010-0036 is the fourth-term permit. The Permit outlines additional steps for an effective, risk-based, storm water management program and specifies requirements to meet applicable water quality standards. This Order requires the Permittees to investigate sources of pollutants in storm water runoff where activities that the Permittees conduct, approve, regulate or authorize through their licensing and permitting processes, have a reasonable potential to exceed water quality standards.

B. **Regulatory Basis/Legal Authorities**

1. This Order is issued pursuant to CWA Section 402(p) (USC §1342(p)) and implementing regulations adopted by the United States Environmental Protection Agency (USEPA) as codified in Code of Federal Regulations, Title 40, Parts 122, 123, and 124 (40 CFR 122, 123 & 124); the Porter Cologne Water Quality Control Act (Division 7 of the Water Code, 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. The Basin Plan also incorporates all state water quality control plans and policies. 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 of 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 Board)).

3. The requirements contained in this Order are deemed necessary to protect water quality standards[6] of the receiving waters and to implement the plans and policies described in Finding 1, above. These plans and policies contain numeric and narrative water quality standards for the waterbodies in this Region. In accordance with Section 402(p)(2)(B)(iii) of the CWA and its implementing regulations (40 CFR Parts 122, 123, & 124), 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). The legislative history and the preamble to the federal storm water regulations (40 CFR Parts 122, 123 and 124) indicate that Congress and the USEPA were aware of the difficulties in regulating Urban 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

[6] Under the Clean Water Act, the beneficial uses and the water quality objectives to protect those beneficial uses are collectively referred to as water quality standards.

best management practices (BMPs)[7] to reduce, consistent with the MEP standard, the discharge of pollutants in urban storm water from the MS4s in order to support attainment of water quality standards.

4. 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 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 BMPs that are designed to meet water quality standards. Most municipal storm water permits issued in California specify certain minimum control measures and incorporate an iterative process that requires increasingly more effective control measures if the water quality standards are not met.

5. This Order is also consistent with the 2006 San Bernardino County Superior Court decision related to storm water permitting that upheld the Regional Board's position regarding the City of Rancho Cucamonga's appeal of the 2002 San Bernardino County MS4 Permit, Order No. R8-2002-0012 (City of Rancho Cucamonga vs. Regional Water Quality Control Board – Santa Ana Region, Fourth Appellate Court, Super. Ct. No. RCV 071613).

6. 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)).
   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. Certain assessments may require voter approval[8].
   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)).

[7] Best Management Practices (BMPs) are programs, policies and practices, including structural and engineering controls, to control the discharge of pollutants that are maximized in efficiency. Also see BMP definition under Glossary.

[8] 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).

C. **Rationale for Requirements**

1. The Regional Board developed the requirements in this Order based on information submitted as part of the ROWD, the MSWMP, monitoring and reporting data, program audits, and other available information and these requirements are consistent with the federal and state laws and regulations. The Fact Sheet (Attachment 6) contains additional regulatory background information and rationale for requirements in this Order. The Fact Sheet is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments 1 through 9 are also incorporated into this Order.

2. The ROWD included a program effectiveness analysis and recommended a shift in the San Bernardino County MS4 program from programmatic/administrative tasks to compliance based on water quality standards and on tasks identified in the implementation plans for total maximum daily loads (TMDLs). The MSWMP includes risk-based, outcome-oriented and compliance-focused programs and performance commitments. The MSWMP is a dynamic document that implements programs and policies to control the discharge of pollutants in Urban Runoff consistent with the MEP standard. If the control measures proposed and implemented as per the MSWMP and other requirements included in this Order are not effective in meeting water quality standards, the Permittees are required to revise the MSWMP with more effective control measures.

3. The MSWMP includes the Permittees' performance commitments for each of the major program elements and those performance commitments are incorporated into this Order.

4. Regional Board staff evaluated each of the Permittees' storm water programs and determined that one of the major deficiencies in the programs was a lack of a written procedure on how to implement various elements of the MSWMP. This Order requires each of the Permittees to develop and implement its own Local Implementation Plan (LIP). The LIP should document internal procedures for implementation of the program elements described in the MSWMP.

5. This Order requires the Permittees to revise the MSWMP and associated documents, as needed, to incorporate any applicable requirements in this Order, any applicable TMDLs adopted by the Regional Board and approved by the State Board, Office of Administrative Law and the USEPA, and to incorporate any additional applicable BMPs needed to meet water quality standards. All documents submitted in accordance with this Order for approval by the Executive Officer or the Regional Board

will be publicly noticed prior to approval by the Executive Officer or the Regional Board[9].

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 et seq. (*County of Los Angeles v. California State Water Resources Control Board* (2006) 142 Cal.App.4th 985, mod. (Nov 6, 2006, B184034) 50 Cal. Rptr.3d 619, 632-636.) This action also involves the re-issuance of waste discharge requirements for existing MS4s that discharge storm water and urban runoff and as such, is exempt from the provisions of California Environmental Quality Act (commencing with Section 21100) in that the activity is exempt pursuant to Title 14 of the California Code of Regulations Section 15301.

E. **Discharge Characteristics/Risk-Based Storm Water Management**

1. This Order regulates the discharge of pollutants from anthropogenic (generated from human activities, excluding agricultural activities) sources and/or activities in urban and storm water runoff, and certain types of de-minimus discharges specifically authorized under Section V of this Order, from areas under the jurisdiction of the Permittees. The term storm water as used in this Order includes storm water runoff, snowmelt runoff, and surface runoff and drainage. Storm water discharges consist of surface runoff that discharges into Waters of the U.S. The quality of these discharges varies considerably and is affected by land use activities, hydrology and geology, season, the frequency and duration of storm events, and the presence of illicit disposal practices and illegal connections.
2. Studies conducted by the USEPA, the states, counties, cities, flood control districts and other political entities dealing with urban and "storm water" runoff identified the following major sources of urban runoff "pollution" nationwide[10]:

   a. Industrial sites where appropriate pollution prevention and best management practices (BMPs) are not implemented;

[9]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 the to 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.

[10] See Attachment 4-Glossary, for definition of "storm water", and "pollution".

b. Construction sites where erosion and siltation controls and other BMPs are not implemented; and,
c. Runoff from urbanized areas; and
d. Natural background, including leaching of naturally-occurring nutrients and minerals from local soils.

3. A number of permits have been adopted to address pollution from the anthropogenic sources identified in Finding 2, 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, now incorporated into NPDES No. CAS000002). 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 for projects requiring coverage under the State's General Permits to be effective 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.

4. 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 San Bernardino County (California Steel and Ecology Auto Wrecking[11]) with individual storm water permits. 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.

5. 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. The Permittees have enacted a system of local ordinances, building permits and business licensing practices to regulate residential, industrial and construction sites within their jurisdiction for the purpose of reducing storm water pollution consistent with the maximum extent practicable standard.

[11] Ecology Auto Wrecking does not discharge storm water into waters of the U.S.

6. The Regional Board administers compliance with the State's General Industrial and Construction Activities Storm Water Permits. A coordinated effort between the Permittees and the Regional Board staff is critical to avoid duplicative effort when overseeing the compliance of dischargers covered under these General Permits. As part of this coordination, the Permittees have been notifying Regional Board staff when, during their routine activities, they observe conditions that pose a potential threat to water quality or when they discover an industrial facility or construction activity that failed to obtain coverage under the applicable general storm water permit.

7. The Permittees have conducted storm water and receiving water monitoring as required under the first, second and third term permits. These monitoring data and data from other sources have confirmed that urban and storm water may contain waste, as defined in CWC § 13050, and pollutants that adversely affect the quality of the Waters of the U.S. The discharge of Urban Runoff from an MS4 is defined in the CWA as a "discharge of pollutants from a point source" into Waters of the U.S.

8. Urban and storm water runoff may contain elevated levels of pathogens (bacteria, protozoa, viruses), sediment, trash, fertilizers (nutrients: nitrogen and phosphorus compounds), pesticides (DDT, chlordane, diazinon, chlorpyrifos, etc.), heavy metals (cadmium, chromium, copper, lead, zinc, etc.), and petroleum products (oil, grease, petroleum hydrocarbons, polycyclic aromatic hydrocarbons, etc.). Storm water can carry these pollutants to rivers, streams, lakes, bays and the ocean (receiving waters).

9. These pollutants can impact the beneficial uses of the receiving waters and can cause or threaten to cause a condition of pollution or nuisance.

10. Pathogens (from sanitary sewer overflows, septic system leaks, spills and leaks from portable toilets, pets, wildlife, and human activities) can impact water contact recreation and non-contact water recreation. Runoff from San Bernardino County areas is tributary to the Santa Ana River which periodically discharges into the Pacific Ocean in Orange County. Although microbial contamination of the beaches from urban runoff and other sources has resulted in beach closures and health advisories in Orange County, discharges from San Bernardino County are typically captured and infiltrated in designated recharge areas downstream of Prado Dam. In the middle Santa Ana River basin areas, the bacterial levels exceed the Basin Plan objectives (see Finding F, below).

11. The Santa Ana River Watershed has been hydraulically separated into the Upper SAR Watershed (upstream from Prado Dam), and the Lower SAR Watershed (downstream from Prado Dam) since the construction of Prado Dam in 1941. The Regional Board regulates discharges from sewage treatment plants upstream of the dam. According to the USGS (2004[12]),

[12] Water Quality in the Santa Ana Basin, California, 1999-2001, Kenneth Belitz, et al, USGS Circular 1238. January 29, 2010 (Final)

water managers utilize almost all of the base flow and most of the stormflow to recharge the coastal aquifer system. Baseflow consists primarily of treated wastewater. Baseflows from the dam are managed, in coordination with the US Army Corps of Engineers, to be captured and infiltrated downstream from the dam; stormflows occasionally exceed the infiltration capacity (OCWD 2009[13]). Water quality in flows from the dam have been monitored for over 40 years and generally found to meet water quality standards specified in the Basin Plan. The dam and the wetlands help to reduce pollutant transport from the upper watershed to the lower watershed. The impoundment area also reduces the transport of trash and debris. As such, water quality management in the upper watershed is targeted to primarily address problems upstream from Prado Dam. Addressing pollutants of concern above Prado Dam will also improve water quality downstream. Augmentation of groundwater through infiltration of baseflow and stormflow is also actively managed in the upper watershed area (e.g. 2006 Chino Creek Integrated Plan: Guidance for Working Together to Protect, Improve, and Enhance the Lower Chino Creek Watershed).

12. Oil and grease from spills 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.

13. Suspended and settleable solids (from construction sites, other sediment sources, trash, and industrial activities) may 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 may also screen out light, hindering photosynthesis and normal aquatic plant growth and development.

14. If released into the environment, toxic substances (including 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.

15. Excessive levels of nutrients (from fertilizer use, fire fighting chemicals, decaying plants, confined animal facilities, pets, and wildlife) can 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.

16. Trash and debris, in particular plastics, are aesthetic nuisances and as threats to freshwater and marine environments. Plastic debris harms hundreds of wildlife species through ingestion, entanglements and

[13] Orange County Water District: Groundwater Management Plan, 2009 Update. July 9, 2009, pp. 4-4

entrapment. Plastic nurdles[14] 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 pre-production plastic from point and nonpoint sources. "Floatables" (from trash and debris) are an aesthetic nuisance and can be a substrate for algae and insect vectors. This Order requires the Permittees to control the discharge of trash and debris, including plastic nurdles, from the MS4s to Waters of the U.S.

17. Management of dry weather discharges resulting from urbanization provides an opportunity to promote water conservation as well as address water quality. This Order requires the Permittees to promote and implement best management practices for water conservation, and thereby, minimize non-stormwater flows into and from the MS4s.

18. 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 includes storm drain outfall monitoring, receiving water monitoring, and dry weather monitoring. The ROWD compared the monitoring results to: (a) water quality objectives in the Basin Plan; (b) CTR objectives; and (c) USEPA storm water benchmarks contained in the USEPA Multi-Sector Industrial Storm Water Permit. In order to ascertain overall water quality conditions in the permitted area, the Permittees also evaluated monitoring data from other sources such as: (a) National Water Quality Assessment conducted by the USGS[15] (NAWQA); and (b) Santa Ana Regional Water Quality Board's Water Quality Assessment per Section 305(b) of the CWA (RWQCB 305(b) Assessment).

19. The Permittees' water quality monitoring data submitted to date document a number of exceedances of water quality objectives specified in the Basin Plan, CTR criteria and/or USEPA's storm water bench mark for fecal coliform bacteria, total suspended solids, nutrients, COD and metals These findings indicate that urban and storm water runoff is causing or contributing to water quality impairments.

20. Comparison of wet weather water quality monitoring data for 2000-2006[16] with that from 1994-1999[17] shows that the median concentrations for most

[14] Nurdles: pre-production plastic pellets or plastic resin pellets
[15] Belitz, K., Hamlin, S.N.,Burton, C.A., Kent, R., Fay, R.G., and Johnson, T., 2004. *Water Quality in the Santa Ana Basin, California,* 1999-2001.Circular 1238. U. S. Geological Survey. (This is only one of several USGS reports.)
[16] 2006 ROWD
[17] 2002 ROWD

constituents have not changed significantly. Furthermore, monitoring data for the period 1994-2006 indicate that median concentrations of wet weather composite samples at monitoring stations[18] 2, 3, and 8 exceeded the USEPA benchmarks for TSS, COD, NO_3-N, and metals. With the exception of Site 10 (Santa Ana River upstream of Seven Oaks Dam, with drainage from mostly undeveloped areas), coliform bacteria concentrations were far above the Basin Plan water quality objectives. These data support the need for continued monitoring and additional control measures to control the discharge of pollutants from the MS4s.

21. A limited number of constituents were monitored during dry weather at representative urban runoff locations and some of these constituents also exceeded the Basin Plan objectives. These findings indicate that additional surveillance and controls may be needed to minimize and/or eliminate dry weather flows into and from the MS4s.

22. The Principal Permittee conducted an analysis of the receiving water monitoring data collected during the last 15 years for a number of monitoring sites (Sites 2, 3, 8[19], and 10[20]). This analysis indicates that the most significant water quality problem associated with urban and storm water runoff is bacterial contamination. It also showed that Basin Plan objectives for metals such as lead, copper, and zinc[21] are exceeded more frequently than Federal promulgated standards. The Permittees monitoring data were then compared to monitoring data available from other sources (NAWQA, RWQCB 305(b) Assessment) to determine beneficial use impacts and pollutants causing the impacts. This analysis was then used to prioritize problem areas and to propose a risk-based approach to address these problems.

23. Based on the evaluation of monitoring data described above, the ROWD prioritized the pollutants of concern with regards to storm water management as follow:

    a. High Priority: Coliform bacteria
    b. Medium Priority: Zinc, copper, lead
    c. Low Priority: Nutrients, COD, TSS

[18] Drainage at Site 2 (Cucamonga Creek @ Hwy 60) is predominantly urban, influenced by commercial and industrial land uses with some contribution from open space/rural and residential land uses. The predominant land use at Site 3 (Cucamonga Creek @ Hellman) is agricultural, but there is contribution from open space/rural, and discharge from a municipal wastewater treatment plant between Sites 2 and 3. Monitoring site 5 (Hunts Lane n/o Hospitality Lane) is within a constructed storm drain system and flow is mostly from commercial and light industrial land uses with some urban contribution.

[19] Site 8 station is located in the Santa Ana River (SAR) at Hamner Avenue, runoff is mostly from urban land uses.

[20] Site 10 station is located at SAR, upstream of Seven Oaks Dam; runoff is mostly from open/rural areas.

[21] There is no Basin Plan objective for zinc, USEPA benchmark is 0.117 mg/l.

F. **CWA Section 303(d) Listed Waterbodies and TMDLS (Also see Section L)**

1. Considerable sampling data have been collected to characterize ambient receiving water quality in the Region. Water quality assessments conducted by the Regional Board have identified a number of beneficial use 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 its region. 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. The Regional Board's 2006 water quality assessment listed a number of water bodies within the permitted area under Section 303(d) as impaired water bodies (see Table 3)[22].
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 maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. 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, with a margin of safety. The TMDLs are one of the bases for limitations established in waste discharge requirements.
4. For 303(d) listed waterbodies without a TMDL, the Permittees are required to participate in the development and implementation of TMDLs and Watershed Action Plans. If a TMDL has been developed and an implementation plan is yet to be developed (e.g., when the USEPA has established the TMDL), the Permittees are required to develop constituent specific source control measures, conduct additional monitoring and/or cooperate with the development of an implementation plan.

Table 3. CWA Section 303(d) List of Water Quality Limited Segments, Santa Ana Region {Waterbodies Requiring a TMDL in San Bernardino County[1]}

Water Body Name	Pollutant / Stressor	Potential Sources	Proposed TMDL Completion
Big Bear Lake	Copper[2]	Resource extraction	2007
	Mercury	Resource extraction[5]	2007
	Metals	Resource extraction	2007

[22] On April 24, 2009, the Regional Board adopted Resolution No. R8-2009-0032 approving the 2008 Integrated Report of Federal Clean Water Act Section 305(b) and Section 303(d) List of Water Quality Limited Segments. 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.

	Noxious aquatic plants	Construction/Land development, Unknown point source	2006
	Nutrients	Construction/Land development, Snow skiing activities	2006
	PCBs (Polychlorinated biphenyls)	Source unknown	2019
	Sedimentation/Siltation[3]	Construction/Land development, Snow skiing activities, Unknown nonpoint source	2006
Summit Creek	Nutrients	Construction/Land development	2008
Knickerbocker Creek	Pathogens[4]	Unknown nonpoint source	2005
	Metals	Unknown nonpoint source	2007
Grout Creek	Metals	Unknown nonpoint source	2007
	Nutrients	Unknown nonpoint source	2008
Rathbone (Rathbun) Creek	Sedimentation/Siltation	Unknown nonpoint source Snow skiing activities	2006
	Nutrients	Unknown nonpoint source Snow skiing activities	2008
Mountain Home Creek	Pathogens	Unknown nonpoint source	2019
Mountain Home Creek, East Fork	Pathogens	Unknown nonpoint source	2019
Lytle Creek	Pathogens	Unknown nonpoint source	2019
Mill Creek (Prado Area)	Nutrients	Agriculture, Dairies	2019
	Total Suspended Solids (TSS)	Dairies	2019
Prado Park Lake	Nutrients	Nonpoint source	2019
Chino Creek Reach 1	Nutrients	Agriculture, Dairies	2019
Mill Creek Reach 1	Pathogens	Unknown nonpoint source	2019
Mill Creek Reach 2	Pathogens	Unknown nonpoint source	2019
Santa Ana River, Reach 4	Pathogens	Nonpoint source	2019

[1] Based on STATE BOARD 2006 CWA Section 303(d) List of Water Quality Limited Segments, Santa Ana Regional Water Quality Control Board, USEPA Approved June 28, 2007 (http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/r8_06_303d_reqtmdls.pdf)

[2] Big Bear Lake is recommended for delisting for copper in the Proposed 2008 303(d)-305(b) Integrated Report

[3] Big Bear Lake is recommended for delisting for sedimentation/siltation in the Proposed 2008 303(d)-305(b) Integrated Report

[4] (See Section 6, below).

[5] Resource extraction was removed as a potential source for Mercury in Big Bear Lake and replaced with atmospheric deposition in the Proposed 2008 303(d)-305(b) Integrated Report

5. Big Bear Lake is included under the 2006 CWA Section 303(d) list for mercury. Historical and recent monitoring conducted by Regional Board staff and other entities confirm that the Office of Environmental Health

Hazard Assessment's (OEHHA) mercury fish tissue screening level of 0.3 mg/kg has been exceeded. This finding is likely to impact REC1 (fishing) uses of Big Bear Lake. Recent monitoring efforts and technical support documents (Tetra Tech, 2008)[23] to determine the source of mercury and to develop TMDLs indicate that though majority of the watershed load originates from atmospheric deposition, delivery is dependent on runoff and sediment transport to the lake. However, there is insufficient data to draw conclusions about the effect of urbanization on mercury input to the Lake.

a. It has been demonstrated that mercury loadings are proportional to fine sediment loads and sediment loads are directly proportional to increases in flow rates.

b. Urbanization generally increases impermeable surfaces and that results in increased flow rates which in turn could increase mercury loadings to Big Bear Lake.

c. The Big Bear Lake Mercury TMDL is expected to be completed and approved within this permit cycle. This Order may be reopened to include any additional requirements from the Mercury TMDL Implementation Plan.

d. Pending adoption of the Big Bear Lake Mercury TMDL, this Order requires the stakeholders to participate in the implementation of control measures to minimize the impact of urbanization on water quality.

6. **Knickerbocker Creek Sole Source Pathogen Investigation and Control:**

a. Knickerbocker Creek is one of Big Bear Lake's tributaries. It is engineered and constructed of concrete through the Big Bear Village area to carry flows from 100-year frequency flood event, but is a natural channel within the upper boundaries of the City and the Forest Service area. The Creek is an ephemeral stream that flows largely in response to storm events or during the spring when runoff is comprised largely of snowmelt.

b. The Basin Plan designates municipal and domestic water supply (MUN), water contact recreation (REC1) and non-contact water recreation (REC2) as beneficial uses of Knickerbocker Creek.

c. To protect MUN beneficial use, the Basin Plan specifies a numeric water quality objective for total coliform of less than 100 organisms/100 mL. To protect REC1 beneficial use, the Basin Plan specifies numeric water quality objectives for fecal coliform indicator bacteria of log mean less than 200 organisms/100 mL based on five or more samples/30

[23] Big Bear Lake Technical Support Document for Mercury TMDL,, September 2008, Prepared by Tetratech for U.S EPA Region 9 and Santa Ana Regional Water Quality Board

day period and not more than 10% of the samples shall exceed 400 organisms/100 ml for any 30-day period.

d. In 1994, Regional Board issued a report titled "The Investigation of Toxics and Nutrients in Big Bear Lake" which included test results for Big Bear Lake and many of its tributaries for bacterial indicators.

e. The test results indicated that Knickerbocker Creek had bacteria indicator levels that exceeded the MUN and REC1 Basin Plan objectives for total coliform and fecal coliform. In 1994, Knickerbocker Creek was placed on the Clean Water Act Section 303(d) List as impaired for pathogens.

f. As a result of the 303(d) listing, the Regional Board needed to develop a regulatory strategy to address the elevated bacterial levels. Typically, this is the development and implementation of TMDLs.

g. In 2000, Regional Board staff initiated development of TMDLs in the Big Bear Lake watershed, including the Knickerbocker Creek bacteria indicator TMDL. A sampling program was conducted from June 2002 through April 2003, on five sites along the Creek, to identify potential sources of elevated bacteria levels, if any.

h. The results of the sampling program indicated that at times, bacterial indicators exceeded the Basin Plan objectives for total and fecal coliform objectives at the sampling sites located within city boundaries. However, data from the station representing drainage from the forested area indicated that bacterial indicator concentrations complied with the Basin Plan objectives.

i. The monitoring results indicated that although bacteria were also detected outside of city boundaries, the concentrations were not high enough to cause water quality objectives to be exceeded in Knickerbocker Creek.

j. The sampling program identified the runoff from the City as a sole source of bacteria contamination in Knickerbocker Creek. Regional Board staff determined that the bacteria sources in Knickerbocker Creek could be addressed through the MS4 permit without developing a detailed TMDL.

k. Since most of the inlets to Knickerbocker Creek are from a conduit or other channelized systems from the City, the City was required to address this bacterial problem.

l. Pursuant to Provision IV, Receiving Water Limitations, Order No. R8-2002-0012 (third-term permit), the Executive Officer directed the City of Big Bear Lake to submit by September 30, 2005: (i) a plan and a schedule for identification and investigation of the sources of bacteria; (ii) a list of the BMPs that are currently being implemented and additional BMPs that must be implemented to address the exceedance

of bacteria in Knickerbocker Creek; (iii) a plan and a schedule for implementation of additional control measures (including BMPs) to reduce or eliminate the exceedances; and (iv) a plan and a schedule for implementation of a monitoring program to evaluate the efficacy of any control measures implemented[24].

m. In compliance with the above, the City of Big Bear Lake submitted a plan and a schedule and conducted a source identification study and Phase 1 of the water quality monitoring program in 2006. The City investigated the entire sewer and septic systems located near Knickerbocker Creek and found no sanitary sewer leaks or septic system problems in the area.

n. Molecular DNA analysis confirmed that the bacteria contamination was not from human sources, but more likely from canine sources (domestic dogs).

o. In December 2007, the City purchased and installed several pet waste stations in the Knickerbocker Creek catchment areas, and installed portable toilets near parks and other recreation areas to reduce the potential for bacteria contamination in the Creek. The City believes that these control measures should address the bacteria problems in the Creek.

p. The City is currently implementing Phase 2 of the water quality monitoring program[25] to assess the effectiveness of these control measures. Three sampling locations in the Creek within City boundaries were selected based on increased frequency of high bacteria levels and availability of sustained flows.

q. This Order requires the City to continue monitoring and assessment of the effectiveness of its control measures and to submit an annual progress/status report.

7. Within the permitted area, there are six fully approved TMDLS: (a) five Middle Santa Ana River Bacterial Indicator TMDLs (MSAR TMDL); and (b) one Big Bear Lake Nutrient TMDL for Dry Hydrological Conditions. The Basin Plan amendment incorporating the MSAR TMDLs 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.

[24]Santa Ana Regional Water Quality Control Board, Letter from Gerard J. Thibeault, July 31, 2005, "Determination of Water Quality Standards Exceedance in Knickerbocker Creek Being Caused by MS4 Discharges in the City of Big Bear Lake".

[25]City of Big Bear Lake, January 2008, "Bacteria Monitoring Plan for Knickerbocker Creek Phase 2.

8. The MSAR TMDLs established limits for bacterial source indicators for Santa Ana River (Reach 3) (not in San Bernardino County), Chino Creek (Reaches 1 and 2), Prado Park Lake, Mill Creek (Prado Area), and Cucamonga Creek (Reach 1).

9. The purpose of the MSAR TMDL is to assure that REC1 beneficial uses are protected. To that end, the Regional Board adopted wasteload allocations for fecal coliform and *E. coli* in the above impaired waterbodies. 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*. 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. When and if the Basin Plan is amended to incorporate new beneficial use definitions, designations and/or bacterial standards, the MSAR TMDLs will be revised, as appropriate.

10. The MS4 dischargers are required to develop and implement BMPs designed to reduce bacterial pollution to the maximum extent practicable and to evaluate the effectiveness of those efforts towards attainment of WLAs by the compliance dates. The TMDL implementation plan envisioned short-term solutions, including monitoring, and development of a long-term plan designed to achieve compliance by the deadlines specified in the TMDL.

11. The MSAR TMDL Implementation Plan assigns responsibilities to MS4 dischargers and other stakeholders. These responsibilities include monitoring and evaluating compliance, identifying sources of impairment, and evaluating the effectiveness of BMPs and other control actions. The MSAR TMDL implementation plan assigns responsibilities for urban discharges 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. 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.

12. The MSAR TMDL Task Force members are listed in Table 4:

Table 4. Middle Santa Ana River Bacterial Indicator TMDL Task Force

MS4 Permittees	Non-MS4 Permittees
San Bernardino County Flood Control District (as Principal Permittee and on behalf of the Co-Permittees named in the TMDL)	Santa Ana Watershed Project Authority (SAWPA)
Corona, City of (Riverside County MS4 Permittee)	
Norco, City of (Riverside County MS4 Permittee)	US Department of Agriculture-Forest Service
Riverside, City of (Riverside County MS4 Permittee)	Milk Producers Council
Riverside, County of (Riverside County MS4 Permittee)	Chino Basin Watermaster Agricultural Pool
Riverside County Flood Control and Water Conservation District (Riverside County MS4 Principal Permittee)	Region 4 MS4 Permittees: Cities of Claremont and Pomona (pending formal agreement)

13. Requirements in the MSAR TMDLs include the following:

    a. WLAs for urban discharges and for CAFOs (Concentrated Animal Feeding Operations), and LAs for agriculture and natural sources (open space and undeveloped forest land) during wet and dry weather conditions.

    b. Numeric targets for fecal coliform and *E. coli*.

    c. Specific implementation tasks to ensure compliance with the numeric targets, WLAs and LAs. Some of these tasks have been completed.

        i. Pursuant to Task 3, the MSAR TMDL Task Force submitted a monitoring plan which was approved by the Regional Board on June 29, 2007 (Resolution No. R8-2007-0046). A revised monitoring plan that included a BMP effectiveness study was approved by the Regional Board on April 18, 2008 (Resolution No. R8-2008-0044).

        ii. A BMP effectiveness study was completed as part of the watershed-wide BMP effectiveness component of the Middle Santa Ana River Water Quality Monitoring Plan (dated April 3, 2008). The results of this study will be incorporated into BMP selection criteria that will be utilized as a guide to address bacterial indicator sources within the MSAR watershed. The Riverside County Flood Control District plans to conduct a phase 2 study at its LID testing facility to evaluate the effectiveness of several LID-based BMPs, which will further guide BMP selection in the watershed.

        iii. Pursuant to Task 4.1, the MSAR TMDL Task Force submitted an Urban Bacterial Indicator Source Evaluation Plan (USEP) that was approved by the Regional Board on April 18, 2008 (Resolution No. R8-2008-0044). The USEP is a phased approach. The first phase

of the approved USEP has been completed and a 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. The next phase of the USEP will focus on BMP retrofit implementation to address elevated indicator bacteria from urban drainage areas flowing into Mill Creek and Cucamonga Creek.

iv. Consistent with Task 4.2, this Order requires the Permittees to revise the MSWMP to incorporate the results of the USEP and/or other studies. The MSWMP revisions shall include schedules for meeting the bacterial indicator wasteload allocations based on the schedule established in the MSAR TMDLs and the results of the USEP and/or other studies.

v. Pursuant to Task 4.4, 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.

vi. Based on the results of pre-compliance evaluation monitoring[26], it has been determined that the short-term solutions discussed above are not expected to achieve the WLAs by the compliance dates. This Order requires the MSAR Permittees to develop a long-term plan (a comprehensive bacteria reduction plan, CBRP) designed to achieve compliance with the WLAs by the compliance dates.

vii. If necessary, the CBRP will be updated based on an evaluation of the effectiveness of the BMPs implemented. In the absence of an approved CBRP the WLAs become the final numeric water quality-based effluent limit that must be achieved by the compliance dates.

14. On April 21, 2006, the Regional Board adopted the Big Bear Lake Nutrient TMDL for Dry Hydrological Conditions (Resolution R8-2006-0023); the State Board approved the Basin Plan Amendment on April 3, 2007 and the Office of Administrative Law approved the Basin Plan Amendment on August 21, 2007. USEPA approved the TMDL on September 25, 2007. There were insufficient watershed and in-lake nutrient data to support development of TMDLs, load allocations, and wasteload allocations for average and/or wet hydrologic conditions; therefore the TMDL is specific to dry hydrological conditions. This Order requires the Permittees to implement the tasks identified in the implementation plan for the Big Bear Lake Nutrient TMDL for Dry Hydrological Conditions (Big Bear Lake Nutrient TMDL).

[26] 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.

15. Some of the details of the implementation plan for the Bear Lake Nutrient TMDL are described below.

    a. The Big Bear Lake Nutrient TMDL includes an urban WLA for total phosphorus for dry hydrologic conditions. Phosphorus is the primary limiting nutrient in Big Bear Lake and nitrogen can be a limiting nutrient under certain conditions.

    b. Nutrient discharges to the Lake have promoted the proliferation of nuisance aquatic plants which have impacted the Lake's beneficial uses and dissolved oxygen levels.

    c. The Big Bear Lake Nutrient TMDL specifies response targets for chlorophyll a, macrophyte coverage and percentage of nuisance aquatic vascular plant species for Big Bear Lake. These response-targets provide a method to track improvements in water quality resulting from reductions in phosphorus loading.

    d. Whereas the Big Bear Lake Nutrient TMDL is applicable only to dry hydrologic conditions, the numeric targets specified in the TMDL apply to all hydrological conditions. The TMDL specifies that these targets be achieved no later than 2015 for dry hydrological conditions and no later than 2020 for all other hydrological conditions. The Regional Board will judge BMP effectiveness primarily on the basis of how well the MS4s adaptive management program does at meeting these targets for the controllable sources within their jurisdiction.

    e. The urban wasteload allocations are currently being met. This Order requires the County of San Bernardino, San Bernardino County Flood Control District and the City of Big Bear Lake (the Big Bear Lake MS4 Permittees) to continue to monitor and to develop and implement additional BMPs, if necessary.

    f. The Big Bear Lake MS4 Permittees also participate in a stakeholder effort to achieve the following Big Bear Lake Nutrient TMDL numeric targets:

Table 5. Big Bear Lake Nutrient TMDL Numeric Targets

Indicator	Target Value[a]
Total P concentration	Annual average[b] no greater than 35 µg/L; to be attained no later than 2015 (dry hydrological conditions), 2020 (all other times)[c]
Macrophyte Coverage	30-40% on a total lake area basis; To be attained by 2015 (dry hydrological conditions), 2020 (all other times)[c,d]
Percentage of Nuisance Aquatic Vascular Plant Species	95% eradication on a total area basis of Eurasian Watermilfoil and any other invasive aquatic plant species; to be attained no later than 2015 (dry hydrological conditions), 2020 (all other times) [c,d]
Chlorophyll a concentration	Growing season[e] average no greater than 14 µg/L; to be attained no later than 2015 (dry hydrological conditions), 2020 (all other times)[c]

a Compliance with the in-lake targets to be achieved as soon as possible, but no later than the dates specified

b Annual average determined by the following methodology: the nutrient data from both the photic composite and discrete bottom samples are averaged by station number and month; a calendar year average is obtained for each sampling location by averaging the average of each month; and finally, the separate annual averages for each location are averaged to determine the lake-wide average. The in-lake open-water sampling locations used to determine the annual average are MWDL1, MWDL2, MWDL6, and MWDL9 (see 1.B.4. Implementation Task 4.2, Table 5-9a-i).

c Compliance date for wet and/or average hydrological conditions may change in response to approved TMDLs for wet/average hydrological conditions.

d Calculated as a 5-yr running average based on measurements taken at peak macrophyte growth as determined in the Aquatic Plant Management Plan (see 1.B.4. Implementation, Task 6C)

e Growing season is the period from May 1 through October 31 of each year. The open-water sampling locations used to determine the growing season average are MWDL1, MWDL2, MWDL6, MWDL9 (see 1.B.4. Implementation Task 4.2, Table 5-9a-i). The chlorophyll a data from the photic samples are average by station number and month; a growing season average is obtained for each sampling location by averaging the average of each month; and finally, the separate growing season averages for each location are averaged to determine the lake-wide average.

g. Continued compliance with the WLA will be determined by watershed modeling conducted and reported by the Big Bear Lake MS4 Permittees. By March 31, 2010, the Big Bear Lake MS4 Permittees will submit a final watershed modeling plan that is ready to be implemented and that details how compliance with the WLA will be determined and evaluated. This plan is to be implemented upon approval by the Executive Officer.

h. Where effectiveness assessments indicate WLAs are not being achieved, Big Bear Lake MS4 Permittees must develop and implement additional BMPs or demonstrate that no additional practicable BMPs are available. Compliance with the WLAs is to be achieved through the Permittees' implementation of

BMPs in accordance with the TMDL Implementation Plans or as identified as a result of TMDL special studies approved by the Regional Board.

i. The Big Bear Lake Nutrient TMDL Implementation Plan requires the collection and evaluation of nitrogen data to determine compliance with the existing total inorganic nitrogen (TIN) objective for Big Bear Lake.

j. The Big Bear Lake Nutrient TMDL does not specify nutrient reductions from external watershed sources, which include urban discharges (WLAs), resorts and open space/forested lands (LAs). Instead, the TMDL for Dry Hydrological Conditions specifies a reduction in phosphorus from internal nutrient sources, which are lake sediment and macrophytes. External load dischargers are responsible for reducing their contributions to the internal nutrient loads.

k. On December 6, 2006, the City of Big Bear Lake and Snow Summit, Inc., signed a Memorandum of Understanding (MOU) regarding Snow Summit's storm water discharges into the City's MS4 system. The City of Big Bear Lake and Snow Summit agreed that the City has the authority to regulate storm water discharges from properties, including Snow Summit's facilities; to the extent such storm water discharges enter lands within the boundaries of the City, any waters within the jurisdiction of the City, or the City's MS4 facilities. This provides the City an additional tool to control nutrient discharges to the Lake. Responsible agencies and dischargers in the Big Bear Lake watershed have formed a Big Bear Lake TMDL Task Force. The Big Bear TMDL Task Force members are working jointly to implement requirements of the Big Bear Lake Nutrient TMDL.

l. On May 4, 2009, the Big Bear Lake TMDL Task Force submitted a revised watershed-wide monitoring plan. At the May 22, 2009 board meeting, the Regional Board approved the Big Bear Lake Watershed-wide Nutrient Monitoring Plan by adopting Resolution No. R8-2009-0043. This includes a watershed-wide monitoring plan. The Big Bear Lake In-lake Monitoring Plan was adopted on July 18, 2008 (Resolution No. R8-2008-0070). The monitoring program is designed to determine the sources of phosphorus; support the development of TMDLs applicable to other hydrologic conditions; and evaluate progress towards meeting (by the specified compliance dates) the numeric targets specified in the TMDLs.

m. The Big Bear Lake Nutrient TMDL Task Force has also submitted a lake management plan that is currently being revised based on Regional Board staff comments.

n. Based on a weight of evidence evaluation, if the numeric targets for the Lake are met through in-lake controls or other techniques, this would constitute compliance with the requirements of the TMDL implementation plan.

16. As indicated in Table 3 above, bacteria, metals and nutrients are the pollutants of concern for a majority of the waterbodies within the permitted area. One of the major sources of bacteria and nutrients is concentrated animal feeding

operations. Dairy facilities within the region are regulated under the Regional Board's Concentrated Animal Feeding Operations (CAFO) Permit. The Regional Board enforces the CAFO Permit. The Permittees are required to identify and control urban sources of bacteria, nutrients and other pollutants within their jurisdictions, consistent with the MEP standard.

G. **New Development/Significant Redevelopment – WQMP/LID**

1. Significant numbers of development projects have taken place in San Bernardino County in the last decade. These developments have increased the area of the urbanized portion of the watershed. As development occurs, natural vegetated pervious ground cover is converted to impervious surfaces such as paved 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 (e.g., concrete surface) can neither absorb water nor remove pollutants, and the natural purification characteristics are lost. Urbanization generally increases storm water runoff, volume, and flow velocity. Additionally, conventional urban development significantly increases pollutant loads as the increased population density causes proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage wastes, pesticides, household hazardous wastes, lawn fertilizers, pet wastes, trash, and other anthropogenic pollutants.

2. Impacts from urbanization can especially threaten~~s~~ environmentally sensitive riparian areas as well as stream habitat and structure. Such areas may be much more susceptible to degradation from increased pollutant loads. Therefore, development that would otherwise have minimal impact on the environment may adversely impact a sensitive environment. These State-designated environmentally sensitive areas (ESAs) include those areas designated in the Basin Plan as supporting the following beneficial uses: (1) "Rare, Threatened, or Endangered Species (RARE)"; and (2) "Preservation of Biological Habitats of Special Significance (BIOL)".

3. Increased volumes and velocities of storm water discharges from MS4s into natural watercourses can cause stream bank erosion and physical modifications that adversely impact aquatic ecosystems and stream habitat. The collective changes in the hydrologic regime caused by development is termed hydromodification. For the permitted area, the remaining natural streams in the mountains and in lightly urbanized or undeveloped portions of the watershed are most likely to experience adverse impacts from any new development or significant redevelopment projects that are built.

4. On October 5, 2000, the State Board adopted Order No. WQ-2000-11, which required that urban runoff generated by 85th percentile storm events from specific types of development categories (priority projects) be infiltrated, filtered or treated. The essential elements of this precedential Order were incorporated into the third-term permit. The Permittees developed a model Water Quality

Management Plan (WQMP) Guidance and Template and are currently implementing the essential elements of the approved model WQMP.

5. Recent studies have indicated that low impact development[27] LID is an effective storm water management approach that minimizes adverse impacts on storm water runoff quality and quantity resulting from urban developments. The Southern 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. This manual will be incorporated into the CASQA BMP Handbooks. The Permittees will incorporate, where feasible and practicable, the LID process outlined in this manual into a revised version of the WQMP.

6. This Order requires 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 use, evapotranspiration and bio-treatment[28] should be considered. To the maximum extent practicable, these LID BMPs must be implemented at the project site. The Regional Board 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 at the project site, more traditional[29], but equally effective control measures should be implemented. This Order provides for alternatives and in-lieu programs where the preferred LID BMPs are infeasible.

7. The USEPA has determined that LID 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 and minimizing changes in site 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,

[27] LID: a set of technologically feasible and cost-effective approaches and practices that are designed to reduce runoff of water and pollutants from the site at which they are generated. By means of infiltration, evapotranspiration, and use of rainwater, LID techniques manage water and water pollutants at the source. LID and Green Infrastructure are sometimes used interchangeably. See also Attachment 4-Glossary, for definition of LID.

[28] In general, these types of BMPs utilize vegetation that promote pollutant uptake and evapotranspiration and/or natural or soil type media filtration with volume retention capacity and ability to reduce pollutant concentration.

[29] Typical engineered and/or proprietary treatment devices that capture/filter pollutants but do not contribute to maintenance of pre-development site hydrology. Examples are vortex separators, catch basin filters.

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 use of preferred LID BMPs.

8. It is recognized that LID principles are universal concepts, however, their applicability is dependent on site-specific factors such as: soil conditions including soil compaction and permeability, groundwater levels, soil contaminants (brown field development), space restrictions (in-fill projects, redevelopment projects, high density development, transit-oriented developments), etc. In the event that LID BMPs techniques, particularly infiltration, evapotranspiration, capture-use, and/or biotreatment, are not feasible at a site, alternatives and in-lieu programs are included that will address water quality/quantity concerns.

9. The model WQMP Guidance and Template provide a framework to incorporate some of the watershed protection principles into the Permittees' planning, construction and post-construction phases of priority projects. The model WQMP requires site design (including, where feasible, LID principles), source control and treatment control elements to reduce the discharge of pollutants in urban runoff. On April 30, 2004, the Regional Board approved the model WQMP Guidance and Template. The Permittees are requiring project proponents to develop and implement site-specific WQMPs. This Order requires the Permittees to verify functionality of post-construction structural BMPs prior to issuance of certificate of occupancy and to track and ensure long term operation and maintenance of post-construction BMPs in approved WQMPs.

10. An audit of each of the Permittees' storm water management programs during the third-term permit indicated a need for improved integration of the watershed protection principles, including LID techniques, specified in the WQMP into the Permittees' General Plan or related documents such as Development Standards, Zoning Codes, Conditions of Approval, Project Development Guidance, etc. It appears that many of the existing procedures, Development Standards, Ordinances and Municipal Codes may include barriers for implementation of LID techniques. This Order requires the Permittees to review and revise the Permittees' CEQA documentation, General Plan, Comprehensive or Master Plan, Municipal Codes, Subdivision Ordinances, Project Development Standards, Conditions of Approval or related documents to remove any barriers, as necessary, and within their control, for implementation of LID techniques and other requirements of this Order.

11. This Order requires the Permittees to ensure that Covenants, Conditions and Restrictions (CC&R) or other mechanisms for proper long term operation and maintenance of post-construction BMPs are carried out in perpetuity.

12. In addition to addressing post-development urban storm water quality, the WQMP includes requirements to protect environmentally sensitive areas and to address potential hydromodification issues that may result from each project. Section 2.3 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 likely to be significant[30] 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, where feasible, LID techniques to minimize HCOC and supports the implementation of in-stream hydromodification protection and/or mitigation alternatives where appropriate.

13. Management of the impacts of urbanization on water quality, stream stability and aquatic habitats can sometimes be more effective if the techniques are implemented based on an overall watershed plan, whether done at the project site, within the neighborhood or within each municipality. During the third term permit, the Permittees initiated a watershed mapping project to develop a GIS-based map of the permitted area with the goal of identifying and developing specific action plans for protecting those segments of streams and channels that are vulnerable to impacts from urbanization.

14. This Order also requires the Permittees to develop a Watershed Action Plan to address cumulative impacts of development on vulnerable streams, preserve or restore to the maximum extent practicable the structure and function of streams in the permitted area, and protect surface water quality and groundwater recharge areas. The Watershed Action Plan should integrate hydromodification and water quality management strategies with land use planning policies, ordinances, and plans within each jurisdiction.

15. Pending approval of a Watershed Action Plan, the Permittees are required to address the impacts of urbanization as required under the approved model WQMP by requiring project proponents to develop and implement project-specific WQMPs.

16. If not properly designed and maintained, the structural treatment control BMPs could create a nuisance and/or habitat for vectors[31] (e.g., mosquitoes and rodents). Third term permit required the Permittees to closely collaborate with the local vector control agencies during the development and implementation of such treatment systems. The Permittees should continue these collaborative efforts with the vector control agencies to ensure that treatment control systems 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 systems and for providing funding for operation and maintenance.

17. If not properly designed and maintained, groundwater infiltration systems could also adversely impact groundwater quality. Restrictions placed on urban runoff

[30] It is expected that the current HCOC mapping effort and stream/risk characterization effort will define what should be considered as significant impact or stream vulnerability to hydromodification on a watershed basis.

[31] Managing Mosquitoes in Stormwater Treatment Devices, Marco E. Metzger, University of California Davis, Division of Agriculture and Natural Resources, Publication 8125.

infiltration in this Order (Section XI.D.8) are based on recommendations provided by the USEPA Risk Reduction Laboratory. The Permittees should continue to work closely with the water districts and water conservation districts to ensure groundwater protection.

H. **Municipal Inspection Programs**

1. The Permittees are required to conduct inspections of construction sites, industrial facilities, and commercial establishments. An evaluation of the Permittees' inspection programs during the third-term permit indicated a wide range of compliance and non-compliance with the inspection requirements. In many instances, the 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.
2. During the third term, the Permittees initiated development of a risk-based prioritization scheme to prioritize facilities for inspections. In the absence of an approved risk-based prioritization scheme, the Permittees are required to use the prioritization methodology specified in the third-term permit. Upon approval of the risk-based prioritization scheme, the Permittees are required to utilize that system to prioritize their inspections.

I. **Illegal Discharges/Illicit Connections**

1. Illegal discharges to the MS4s could contribute to storm water and other surface water contamination. During the second term permit, the Permittees completed a reconnaissance survey of their open channels and underground storm drains to detect and eliminate any illicit connections (undocumented or unpermitted connections to the MS4s). The Permittees have trained their staff on illegal discharge surveillance/cleanup procedures. Audits conducted during the third-term permit indicated that this program element is generally carried out through complaint response. 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.

J. **Technology-Based Effluent Limitations (Not Applicable)**

K. **Non-storm Water/De-Minimus Discharges**

1. The MS4s generally convey 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 Effluent Limitations and Discharge Specifications,

Section V.A of this Order. On March 24, 2009, the Regional Board adopted Order No. R8-2009-0003, to address de-minimus types of discharges. The Permittees need not get coverage under the de-minimus permit for the types of discharges listed under Section V.B, as long as they are in compliance with the conditions specified in this Order and the substantive requirements of Order No. R8-2009-0003.

L. **Water Quality-Based Effluent Limitations (WQBELs) and TMDL WLA**

1. 40 CFR 122.44(d) requires that permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving waters. 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 Circuit, 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 EPA discretion to incorporate appropriate water quality-based effluent limitations under another provision, CWA section 402(p)(3)(B)(iii). 40 CFR 122.44(k)(3) allows the use of BMPs to control or abate the discharge of pollutants 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 indicated that Congress and the USEPA were aware of the difficulties in regulating urban and storm water runoff solely through traditional end-of-pipe treatment. It is the Regional Board's intent to require the Permittees to implement best management practices consistent with the MEP standard in order to support attainment of water quality standards. This Order includes receiving water limitations based on applicable water quality standards; it prohibits the creation of nuisance and requires the reduction of water quality impairment in receiving waters. The Permit includes a procedure for determining whether storm water discharges are causing or contributing to exceedances of receiving water limitations and for evaluating whether the MSWMP 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 MEP, this Order requires the Permittees to implement a number of management practices and an iterative process to ensure that water quality standards are achieved. The Permittees are required to:

   a. Implement BMPs at all their facilities and for all their activities,

b. Require BMPs, including, where appropriate, LID techniques, to be implemented at new and re-development project sites prior to accepting discharge from these sites into their MS4s,

c. Implement and annually evaluate the MSWMP and each Permittee's LIP for effectiveness in reducing pollutants in urban and storm water runoff, and

d. Perform monitoring and reporting to determine the adequacy of BMPs within the permitted area and to determine the pollutants of concern based on comparisons of monitoring data with the applicable water quality standards.

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 wasteload allocation for the discharge prepared by the State and approved by EPA." Consistent with this requirement, this Order includes a process for developing a BMP-based approach, which, if adopted by the Regional Board prior to the compliance date(s) specified in the associated TMDL Implementation Plan, shall become the final water quality-based effluent limitation(s). Permittees are required to submit a BMP-based comprehensive plan (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. Once the Regional Board approves this comprehensive plan, this Order will be amended to include the comprehensive plan as the final water quality-based effluent limit that is consistent with the WLAs. If the Regional Board does not approve the comprehensive plan prior to the compliance date(s), the WLAs will become the final water quality-based effluent limits on the applicable compliance date and will remain in effect until a BMP 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. The WLAs for Big Bear Lake Nutrient TMDLs are currently being achieved. The Permittees in the Big Bear Lake area are required to continue to implement BMPs (specific tasks identified in the Big Bear Lake Nutrient TMDL Implementation Plan) and to monitor to ensure continued compliance with the WLAs.

4. If water quality standards in the impaired receiving waters are met through implementation of appropriate control measures, this would constitute compliance with the effluent limits.

5. Maximum daily concentration limits are also included for de-minimus types of discharges from Permittee owned and/or operated facilities and activities and for total dissolved solids and total inorganic nitrogen for dry weather discharges.

M. **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 objectives for all waters in the Santa Ana Region addressed through the Plan.

2. More recently, the Basin Plan was amended significantly to incorporate revised boundaries for groundwater sub-basins, 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 (R8-2004-0001) was adopted by the Regional Water Board on January 22, 2004. The State Water Resources Control Board (State Water Board) and Office of Administrative Law (OAL) approved Order No R8-2004-0001 on September 30, 2004 and December 23, 2004, respectively. The U.S. Environmental Protection Agency approved the surface water quality standards and related provisions of Order R8-2004-0001 on June 20, 2007. Order R8-2004-0001 includes TDS/TIN limits for direct dry weather discharges into surface waters within the permitted area based on the objectives specified in Table 4-1 of the Basin Plan, as amended. Storm water was considered to be an insignificant source for nitrogen/TDS in groundwater. These amendments were all incorporated into and updated in a single revised basin plan in February 2008.

3. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic water supply. Beneficial uses recognized in the Basin Plan for surface waters in the permitted 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

   The existing and potential beneficial uses of groundwater that could be impacted by the discharge of urban and storm water runoff within the permitted area include the following:

   a. Municipal and Domestic Supply,
   b. Agricultural Supply,

c. Industrial Service Supply, and
d. Industrial Process Supply

4. 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). This Order implements the Basin Plan and other statewide plans and policies incorporated into the Basin Plan.

N. **National Toxics Rule (NTR) and California Toxics Rule (CTR)**

Regional Board believes that compliance with water quality standards through implementation of best management practices is appropriate for regulating urban and storm water runoff. EPA 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).[32] NTR and CTR are blanket water quality criteria that apply to all surface water discharges. 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.

O. **State Implementation Policy (SIP) (Not Applicable)**

See Section N., above.

P. **Compliance Schedules and Interim Requirements**

The Basin Plan contains schedules for achieving compliance with wasteload allocations for MSAR TMDLs and the Big Bear Lake Nutrient TMDLs. This Order requires the Permittees within these watersheds to comply with those time schedules for various deliverables as specified in the approved implementation plans. Consistent with the State Board's Compliance Schedule Policy, Resolution No. 2008-0025, this Order incorporates interim and final effluent limits, where appropriate. Additionally, since the final TMDL compliance dates are outside the term of this permit, this Order also requires the Permittees to monitor and report the effectiveness of BMPs implemented to evaluate progress towards attainment of TMDL WLAs by the time schedules specified in the implementation plans.

Q. **Antidegradation Policy**

40 CFR 131.12 requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the

[32]See discussions on Wet Weather Flows in the Federal Register/Vol. 65, No. 97/Thursday, May 18, 2000/Rules and Regulations

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, the permitted discharges are consistent with the antidegradation provisions of 40 CFR 131.12 and State Board Resolution No. 68-16.

R. **Anti-Backsliding**

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations of 40 CFR 122.44(*l*) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order. Therefore this Order conforms with the anti-backsliding requirements of the CWA.

S. **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 all applicable control measures are considered. In addition, 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. In response to public comments, the Permittees may modify reports, plans, or schedules prior to submittal to the Executive Officer.

2. Urban runoff can contain pollutants from privately owned and operated facilities such as residences, businesses and commercial establishments, and from public and private institutions. A successful storm water management program should include the participation and cooperation of public entities, private businesses, and public and private institutions. The MSWMP recognizes public education as a critical element. As the population increases in the permitted 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, Publicly Owned Treatment Works, Orange, Riverside, and San Bernardino counties, and the Santa Ana Watershed Project Authority and its member agencies. The entities listed in Attachment 3 are considered as potential dischargers of urban runoff in the permitted 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 discharge permits to these entities.

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 to ensure economical management of water quality in the Region. Recognizing this fact, this Order focuses on watershed management and seeks to integrate the programs of the stakeholders, especially the Permittees under the Orange, Riverside, and San Bernardino County MS4 permits within the Santa Ana Watershed.

5. Public education is an important aspect of every effective urban runoff management program and can promote changes in behavior at a societal level. 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 general education and training, can be effectively addressed on a regional 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, Riverside and Orange and the municipalities within these counties are encouraged to cooperatively work together and generate a unified education and training program.

T. **Monitoring and Reporting**

1. 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements.

2. An effective monitoring program should characterize urban runoff, identify problem areas, determine the impact of urban runoff on receiving waters and assess the effectiveness of BMPs. The Principal Permittee administers and conducts the storm water monitoring program for the Permittees. The third-term Permit includes only wet weather monitoring of MS4 outfalls and receiving waters.

3. 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, including urban runoff and TMDL programs. A number of such efforts are underway where the Permittees are active participants, including the Storm Water Quality Standards Task Force, the Middle Santa Ana River Watershed TMDL Task Force, and the Big Bear TMDL Task Force. This Order encourages continued participation in such programs. Furthermore, this Order recognizes that some of these planning efforts may result in significant changes

to the Basin Plan. If this occurs, the Regional Board may reopen the permit to modify applicable terms and conditions through a public hearing process. In addition, the Regional Board also recognizes that in certain cases it may be necessary and appropriate to fund regional water quality monitoring programs by reallocating funds from lower priority local monitoring programs. The Executive Officer is authorized to approve, after public notification and consideration of all comments received, changes to the watershed management initiatives, regional planning and coordination activities and regional monitoring programs. If the Executive Officer receives any significant comments during the public notification process that cannot be resolved, it shall be scheduled for a public hearing during a regularly scheduled Board meeting. To improve the effectiveness of adopted TMDLs and TMDLs that are expected to be adopted in the near future, this Order requires the Permittees to develop an Integrated Watershed Monitoring Plan that will comprehensively integrate the various urban run-off related monitoring programs, TMDLs and program effectiveness assessments. The Monitoring and Reporting Program is provided in Attachment 5.

4. The Stormwater Monitoring Coalition[33], with technical guidance from the Southern California Coastal Water Research Project prepared "Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California", August 2004 Technical Report No. 419. This report 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." Accordingly, the Monitoring and Reporting Section requires the establishment of urban discharge mass emission stations. An integrated Watershed Monitoring Plan should address any shortcomings in the overall monitoring programs and avoid duplicative efforts within the same watershed.
5. The Storm Water Monitoring Coalition, in partnership with the Southern California Coastal Water Research Project, is conducting a Regional Bioassessment Monitoring effort. This Order requires the Permittees to continue their participation in this regional effort.

U. Standard and Special Provisions

Standard Provisions, reporting requirements, and notifications which apply to all NPDES permits are specified in Federal NPDES Regulation 40 CFR122.41, and additional conditions applicable to specified categories of permits are specified in 40 CFR 122.42. The discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42.

[33] The Stormwater Monitoring Coalition consists of representatives from the Counties of Ventura, Los Angeles, Orange, San Bernardino, Riverside, and San Diego, the Cities of Long Beach and Los Angeles, the SWRCB, CRWQCB Regions 4, 8, and 9, the USEPA, and Caltrans.

V. **Notification of Interested Parties**

The Regional Board has notified the dischargers and interested agencies and persons of its intent to prescribe Waste Discharge Requirements 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 of this Order.

W. **Consideration of Public Comment**

The Regional Board has notified the Permittees, all known interested parties, and the public 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. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and the requirements of this Order.

X. **Alaska Rule**

On March 30, 2000, USEPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) 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 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.

Y. **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. 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 of developing a non-point source plan, for the urban category, under CZARA. .

Z. **Stringency Requirements for Individual Pollutants (Not Applicable)**

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 the regulations and guidelines adopted thereunder, shall comply with the following:

III. PERMITTEE RESPONSIBILITIES

A. Responsibilities of the Principal Permittee:

1. The Principal Permittee shall be responsible for managing the overall storm water program and shall:

   a. Conduct chemical, biological, bacteriological water quality and other monitoring as required by this Order and any additional monitoring directed by the Executive Officer.

   b. Prepare and submit to the Executive Officer of the Regional Board, unified reports, plans, and programs necessary to comply with this Order.

   c. Coordinate and conduct Management Committee meetings as specified in the MSWMP.

   d. Coordinate permit activities and participate in any subcommittees formed as necessary, to coordinate compliance activities with this Order.

   e. Provide technical and administrative support and inform the Co-Permittees of the progress of other pertinent municipal programs, pilot projects, research studies, and other information to facilitate implementation of Co-Permittees' storm water program.

   f. Coordinate the implementation of area-wide storm water quality management activities such as the monitoring program, public education, pollution prevention, etc.

   g. Gather and disseminate information on the progress of statewide municipal storm water programs and evaluate the information for potential use in the execution of this Order.

   h. Monitor the implementation of the plans and programs required by this Order and determine their effectiveness in attaining water quality standards.

   i. Coordinate with the Regional Board on activities pertaining to implementation of this Order, including the submittal of all reports, plans, and programs as required under this Order.

   j. Develop and implement mechanisms, performance standards, design standards, etc., and assist in the consistent implementation of BMPs to the maximum extent practicable among the Permittees.

   k. Cooperate in watershed management programs and regional and/or statewide monitoring programs.

   l. Solicit and coordinate public input for any proposed major changes to areawide storm water management programs (MSWMP) and implementation plans.

   m. 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

n. Within 18 months of permit adoption, the Principal Permittee shall coordinate a review of areawide documents with the Co-Permittees to determine the need for update or revisions and establish a schedule for those revisions. These documents include but are not limited to the Enforcement Consistency Guide, the Municipal Activities Pollution Prevention Strategy, Water Quality Management Plan Guidance and Template, BMP brochures and other areawide documents.

o. Within 6 months of adoption of this Order, the Principal Permittee, in coordination with the Co-Permittees, shall develop and submit an area-wide model Local Implementation Plan (LIP) to the Executive Officer of the Regional Board. The submitted model LIP shall be deemed acceptable to the Regional Board if the Executive Officer raises no written objections within 30 days of submittal. The model LIP should describe each program element per the MSWMP; the departments and personnel responsible for its implementation; applicable standard operating procedures, plans, policies, checklists, and drainage area maps; and tools and resources needed for its implementation. The model LIP should also establish internal and external reporting and notification requirements to ensure accountability and consistency. The model LIP should also describe the mechanisms, procedures, and/or programs whereby the Permittees' individual LIPs will be coordinated through the WAP.

2. In addition, the activities of the Principal Permittee shall include but not be limited to the following for MS4 systems owned or operated by the Principal Permittee:

a. Within 18 months of adoption of this Order, the Principal Permittee shall develop and implement a Principal Permittee-specific LIP, based on the areawide model LIP. A copy of the LIP, signed by the Chair of the Board of Directors for the Principal Permittee, shall be submitted to the Executive Officer within 18 months of the adoption of this Order.

b. Take appropriate enforcement actions necessary to ensure compliance with Water Quality Management Plans, ordinances, implementation plans, and other applicable plans and policies.

c. Inspect, clean, and maintain the MS4 systems within its jurisdiction consistent with the MEP standard.

d. Review Water Quality Management Plans or other post-construction management plans requiring local agency permits.

e. Prior to accepting permanent connections to its MS4 from entities outside its jurisdictional authority, the Principal Permittee shall notify the entities in writing of the General Stormwater Permit (Order No. 2009-0009-DWQ) post-construction standards and the regulatory requirements for control of pollutants in MS4 discharges (including relevant requirements from the MSWMP and WQMP), where feasible, and consistent with the MEP standard. A WQMP

approved by the Co-Permittee with jurisdictional authority may constitute compliance with the General Construction Permit post-construction requirements[34].

f. Review and revise, if necessary, policies and ordinances necessary to establish and maintain adequate legal authority, as required by the federal storm water laws and regulations.

g. Respond to or arrange for responding to emergency situations such as accidental spills, leaks, illicit connections/illegal discharges, etc., to prevent or to reduce the discharge of pollutants to storm drain systems and Waters of the U.S.

h. Track, monitor, and keep training records of all personnel involved in the implementation of the Principal Permittee's LIP.

i. Implement management programs, monitoring programs, and related plans as required by this Order.

j. Solicit and coordinate public input for any proposed major changes to its LIP, the MSWMP, and/or Model WQMP, as appropriate.

B. Responsibilities of the Co-Permittees

1. Within 18 months of adoption of this Order, each Co-Permittee shall develop and implement an LIP for its jurisdiction. The LIP shall describe the Co-Permittee's legal authority, its ordinances, policies and standard operating procedures; identify departments and personnel for each task and needed tools and resources. The LIP shall establish internal departmental coordination and reporting requirements to ensure accountability and consistency. Within 18 months from the adoption of this Order, each Co-Permittee shall adopt a Permittee-specific LIP, based on the areawide model LIP. The LIP shall have the written approval of the Permittee's City Manager or County Supervisor prior to its implementation and shall be updated on an as needed basis. Each Permittee's approved LIP shall be submitted, in electronic format, to the Executive Officer within 18 months of the adoption of this Order.

2. Each Co-Permittee shall be responsible for managing the storm water program within its jurisdiction and shall:

   a. Implement all applicable program elements including but not limited to the management programs, monitoring programs, implementation plans and appropriate BMPs outlined in the MSWMP and the LIP within each respective jurisdiction, and take such other actions as may be necessary to meet the maximum extent practicable (MEP) standard.

   b. Review and revise policies and ordinances necessary to establish and maintain adequate legal authority as stated in Section VI.1 of this Order and

[34] The State General Construction Permit Order No. 2009-0009-DWQ Section XIII

as required by the federal storm water regulations, 40CFR, Part 122.26(d)(2)(i)(A-F).

c. Obtain public input for any proposed major changes to its storm water management program and implementation plans.

d. Inspect, clean, and maintain the MS4 systems within its jurisdiction.

e. Maintain up-to-date GIS-based MS4 facility maps. Annually review these maps and, if necessary, submit revised maps to the Principal Permittee for integration with the HCOC mapping and with the information required for preparation of the Annual Report.

f. Prepare and submit to the Principal Permittee in a timely manner all required information necessary to develop a unified Annual Report for submittal to the Executive Officer of the Regional Board.

3. The Co-Permittees' activities shall include, but not be limited to, the following:

a. Designate at least one representative to the Management Committee and attend at least 7 out of the 8 Management Committee meetings per year. The Principal Permittee shall be notified immediately, in writing, of any changes to the designated representative to the Management Committee.

b. Conduct, and/or coordinate with the Principal Permittee to conduct, any surveys and/or characterizations needed to identify pollutant sources from specific drainage areas.

c. Review and comment on all plans, strategies, management programs, monitoring programs, as developed by the Management Committee, the Principal Permittee or any subcommittee to comply with this Order.

d. Participate in committees or subcommittees formed to address storm water related issues to comply with this Order.

e. Respond to or arrange for responding to emergency situations such as accidental spills, leaks, illegal discharges/illicit connections, etc. to prevent or reduce the discharge of pollutants to storm drain systems and Waters of the U.S.

f. Pursue enforcement actions as necessary within its jurisdiction for violations of storm water ordinances, prohibitions on illicit connections and illegal discharges, and other elements of its storm water management program.

g. Track, monitor, and keep training records of all personnel involved in the implementation of its LIP.

h. Track and monitor operation and maintenance of post-construction BMPs installed in areas within each Permittee's jurisdiction.

i. Prior to accepting permanent connections to its MS4 from entities outside its jurisdictional authority, the co-Permittee shall notify these entities in writing of General Stormwater Permit post-construction standards and the regulatory requirements for control of pollutants in MS4 discharges (including relevant

requirements from the MSWMP and WQMP), where feasible, and consistent with the MEP standard. A WQMP approved by the Co-Permittee with jurisdictional authority may constitute compliance with the General Construction Permit post-construction requirements[35]. The Permittees will also send these notifications to the Regional Board.

j. Track and monitor operation and maintenance of post-construction BMPs installed in areas within each Permittee's jurisdiction.

C. Implementation Agreement

1. As needed, the Permittees shall evaluate the storm water management structure and the Implementation Agreement and determine the need for any revision. The annual report shall include the finding of any such review and provide a schedule if revisions are planned. The Implementation Agreement shall be reviewed and revised, if necessary, to include any cities that were not signatories to this agreement or other non-traditional entities that own or operate conveyance systems within the permitted area. See Attachment 3. If the Implementation Agreement is revised, a copy of the signature page and any revisions to the Agreement shall be included in the annual report.

IV. 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 illegal connections and illicit discharges (non-storm water) from entering municipal separate storm sewer systems unless such discharges are either authorized by a NPDES permit or Waste Discharge Requirements issued by the Regional Board, or not prohibited in accordance with Section V, below.

B. The discharge of Urban Runoff from Permittees' municipal separate storm sewer systems, containing pollutants, including trash and debris that have not been reduced to the maximum extent practicable, to waters of the U. S. is prohibited.

C. The Permittees shall effectively prohibit the discharge of non-storm water into the MS4s unless authorized by a separate NPDES permit, granted a waiver or as otherwise specified in Section V, below.

D. Non-storm water discharges from Permittee activities into Waters of the U.S. are prohibited unless the non-storm water discharges are permitted by a NPDES permit, granted a waiver, or are as otherwise specified in Section V, below.

E. Discharges from the MS4s shall be in compliance with the discharge prohibitions contained in Chapter 5 of the Basin Plan.

F. Discharges into and from the MS4s in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance, as that term is defined in Section 13050 of the Water Code, into waters of the State are prohibited.

[35] The State General Construction Permit Order No. 2009-0009-DWQ Section XIII

G. The discharge to Waters of the U.S., of any substances in concentrations toxic to animal or plant life is prohibited.

H. The discharge to Waters of the U.S., of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

V. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

For purposes of this Order, a discharge may include storm water or other types of discharges identified below.

A. **Authorized Discharges:**

The discharges identified below need not be prohibited by the Permittees except if identified by the Permittees or the Executive Officer as a significant source of pollutants or as a significant vehicle that may cause pollutants to migrate to Waters of the U.S. The MSWMP shall include public education and outreach activities directed at reducing these discharges even if they are not substantial contributors of pollutants to the MS4s and/or the receiving waters.

1. Discharges composed entirely of storm water;
2. Air conditioning condensate;
3. Irrigation water. These discharges shall be minimized through public education and water conservation efforts. Also see Section X.E, Residential Program, and Section C., Nonpoint Source Discharges, below;
4. Passive foundation drains[36];
5. Passive footing drains[37];
6. Water from crawl space pumps[38];
7. Non-commercial vehicle washing, ,e.g. residential car washing (excluding engine degreasing) and car washing for fundraisers by non-profit organizations[39];
8. Dechlorinated swimming pool discharges (cleaning wastewater and filter backwash shall not be discharged into the MS4s or to Waters of the U.S.)
9. Diverted stream flows[40];

[36]The discharge is allowed only if the source water drained from the foundation is stormwater or uncontaminated groundwater. Discharges from contaminated groundwater may require coverage under the General Groundwater Cleanup Permit (Order No. R8-2007-0008, NPDES Permit No CAG918001) or its latest version.

[37]Only uncontaminated discharge is allowed. Otherwise, coverage under Order No. R8-2007-0008 may be required.

[38]The discharge is allowed only if it is uncontaminated; otherwise permit coverage under the General Permit for Discharges from Utility Vaults and Underground Structures, Water Quality Order No. 2006-0008-DWQ (NPDES No. CAG990002) may be required.

[39]Charity car washes should be limited to bona-fide 501 agencies.

[40]Diversion of stream flows that encroach into Waters of the U.S. requires a 404 permit from the U.S. Army Corps of Engineers and a 401 Water Quality Certification from the Regional Board. Stream diversion that requires active pumping may also require coverage under the De Minimus Permit, Order No. R8-2009-0003.

10. Rising ground waters and natural springs[41];
11. Uncontaminated ground water infiltration as defined in 40 CFR 35.2005 (20) and uncontaminated pumped groundwater,
12. Flows from riparian habitats and wetlands;
13. 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 consistent with the MEP standard must be implemented when they do not interfere with health and safety issues.
14. Waters not otherwise containing wastes as defined in California Water Code Section 13050 (d), and
15. Other types of discharges identified and recommended by the Permittees and approved by the Regional Board.
16. The Permittees must evaluate the authorized discharges 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. If the Permittee determines that any are a source of pollutants that exceed water quality standards, the Permittee(s) shall either:
    a. Prohibit the discharge from entering the MS4; or
    b. Authorize the discharge category and ensure that "Source Control BMPs" and Treatment Control are implemented to reduce or eliminate pollutants resulting from the discharge; or
    c. Require or obtain coverage under a separate Regional Board or State Board permit for discharge into the MS4.

B. **Discharge Specifications/De-Minimus Discharges from Permittee Owned and/or Operated Facilities/Activities:**

1. The Permittees shall prohibit the following categories of non-storm water discharges (de minimus discharges) into Waters of the U.S. from Permitttee-owned and/or operated facilities/activities unless the stated conditions are met. The de minimus types of discharges listed in the General De Minimus Permit shall be in compliance with the Regional Board's General De Minimus Permit for Discharges to Surface Waters, Order No. R8-2009-0003, NPDES No. CAG 998001:
    a. Discharges from potable water sources, including water line flushing, superchlorinated water line flushing; discharges resulting from the maintenance of potable water supply pipelines, tanks, reservoirs, etc.; discharges from potable water supply systems resulting from initial system startup, routine startup, sampling activities, system failures, pressure release, etc.; fire hydrant system testing or flushing; and hydrostatic test water: Planned discharges shall be dechlorinated to a

[41]Discharge of rising ground water and natural springs into surface water is only allowed if the groundwater is uncontaminated. Otherwise, coverage under Order No. R8-2007-0008 may be required.

concentration of 0.1 ppm[42] or less, pH adjusted if necessary, and volumetrically and velocity controlled to prevent hydrologic conditions of concern in receiving waters.

b. Dechlorinated swimming pool discharges: Dechlorinated to a concentration of 0.1 ppm[43] or less, pH adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent hydrologic condition of concern in receiving waters. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4s or to Waters of the U.S.

c. Construction dewatering wastes[44] and dewatering wastes from subterranean seepage[45], except for discharges from utility vaults: The following limits shall be met at approved monitoring locations. The maximum daily concentration limit for total suspended solids shall not exceed 75 mg/l, sulfides 0.4 mg/l, oil and grease15 mg/l, total petroleum hydrocarbons 0.1 mg/l; 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.

d. Discharges from facilities that extract, treat and discharge water diverted from waters of the U.S[46]. These discharges shall meet the following conditions: (1) The discharges to Waters of the U.S. must not contain pollutants added by the treatment processes 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.

2. Discharges from lawn, greenbelt and median watering and other irrigation runoff[47] from Permittee's facilities shall be minimized through water conservation efforts. Also see Section X.E, Residential Program

3. Table 4-1 of the Basin Plan incorporates TDS/TIN[48] limits for direct discharges into surface waters in specified management zones within the Santa Ana Region. Permittees discharging to those receiving waters shall comply with the following for dry weather conditions.

   a. For discharges to surface waters, where groundwater will not be affected by the discharge, the maximum daily concentration (in mg/L) for TDS and/or TIN of the

[42] 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.

[43] See footnote 42.

[44] Requirements for construction dewatering of stormwater are covered under the General Permit for Stormwater Discharges Associated with Construction Activity Order No. 99-08-DWQ.or the latest version. Where pollutants other than TSS, sulfides, oil and grease, TPH and pH are a concern in the groundwater, coverage under Order No. R8-2007-0008 may be required.

[45] Discharge of dewatering wastes from subterranean seepage into surface water is only allowed if the groundwater meets specifications. If other pollutants of concern are present or discharge specifications are exceeded, coverage under Order No. R8-2007-0008 may be required.

[46] Diversion of stream flows that encroach into Waters of the U.S. requires a 404 permit from the U.S. Army Corps of Engineers and a 401 Water Quality Certification from the Regional Board.

[47] Non-agricultural irrigation using recycled water must comply with the statewide permit for Landscape Irrigation Using Recycled Water and the State Department Health guidelines.

[48] TDS/TIN=Total dissolved solids/total inorganic nitrogen.

discharge shall not exceed the water quality objectives for the receiving surface water where the effluent is discharged, as specified in Table 4-1 of the Basin Plan.

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 as increases for the purposes of determining compliance with this discharge specification.

4 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.

5 See Section XV for additional requirements for de-minimus types of discharges.

C. Non-point Source (NPS) Discharges

Consistent with the State Water Resources Control Board's 2004 "Policy for the Implementation and Enforcement of the Nonpoint Source Pollution Control Program," the Regional Board may issue Waste Discharge Requirements 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 NPS discharges is not clearly understood, the Regional Board may issue conditional waivers of Waste Discharge Requirements to NPS dischargers, and require monitoring to gather the information necessary to effectively manage these discharges.

D. Water Quality Based Effluent Limitations to Implement the Total Maximum Daily Loads (TMDLs)

1. The Middle Santa Ana River (MSAR) Watershed Bacterial Indicator TMDL-Interim WQBELs (effective upon adoption of this Order)

a. The MSAR Permittees[49] shall:

[49] MS4 Permittees in the MSAR watershed (County, Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, Rialto and Upland) are collectively referred to as the "MSAR Permittees"

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 watershed-wide water quality monitoring program. Beginning in 2010, the 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 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 wasteload allocation 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) urban source evaluation plan (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 and BMPs to address 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 V.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 Municipal Storm Water Management Plan (MSWMP) as specified in Task 4.2 of the MSAR-TMDL Implementation Plan. Summarize any such revisions in the annual report due to the Executive Officer by November 15 of each year.

vi. Revise the Water Quality Management Plan (WQMP) as specified in Task 4.4 of the MSAR-TMDL Implementation Plan. Summarize any such revisions in the annual report due by November 15 of each year.

vii. Amend the Local Implementation Plans (LIP) to be consistent with the revised MSWMP and WQMPs within 90 days after said revisions are approved by the Regional Board. Summarize any such LIP amendments in the annual report due November 15 of each year.

2. Final WQBELs for MSAR Bacterial Indicator TMDL under DRY Weather Conditions

a. The final WQBELs for bacterial indicators under Dry Weather Conditions contained in this section shall be achieved no later than December 31, 2015. These final effluent limits shall be considered effective for enforcement purposes on January 1, 2016.

b. The Final WQBELs for MSAR Bacterial Indicator TMDL under Dry Weather conditions 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 wasteload allocation under dry weather conditions (April 1st through October 31st) by December 31, 2015. The CBRP must include:

(a) The specific ordinance(s) adopted to reduce the concentration of indicator bacteria in urban sources.

(b) The specific BMPs implemented to reduce the concentration of indicator bacteria from urban 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 indicator bacteria.

(d) The specific regional treatment facilities and the locations where such facilities will be built to reduce the concentration of indicator bacteria discharged from urban sources and the expected water quality improvements to result when the facilities are complete.

(e) The scientific and technical documentation used to conclude that the CBRP, once fully implemented, is expected to achieve compliance with the urban wasteload allocation for indicator bacteria by December 31, 2015.

(f) A detailed schedule for implementing the CBRP. The schedule must identify discrete milestones to assess satisfactory progress toward meeting the urban wasteload allocations for dry weather by December 31, 2015. The schedule must also indicate which agency or agencies are responsible for meeting each milestone.

(g) The specific metric(s) that will be established to demonstrate the effectiveness of the CBRP and acceptable progress toward meeting the urban wasteload allocations for indicator bacteria by December 31, 2015.

(h) The MSWMP, WQMP and LIPs shall be revised consistent with the CBRP no more than 180 days after the CBRP is approved by the Regional Board.

(i) 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 indicator bacteria are still being exceeded after the CBRP is fully implemented.

(j) A schedule for developing a CBRP needed to comply with the urban wasteload allocation for indicator bacteria during wet weather conditions (November 1st thru March 31st) to achieve compliance by December 31, 2025.

ii. The draft CBRP must be submitted to the Regional Board no later than 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 document and recommend necessary revisions no more than 90 days after receiving the draft plan. The MSAR 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 CBRP, as a final water quality-based effluent limitation for the Dry Weather Urban Wasteload Allocation, 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 make a finding that the CBRP, when fully implemented, shall achieve the urban wasteload allocations for indicator bacteria by no later than December 31, 2015.

iii. Once approved by the Regional Board, the CBRP shall be incorporated into this Order as the final WQBELs for indicator bacteria under Dry Weather Conditions. Based on BMP effectiveness analysis, the CBRP shall be updated, if necessary. The updated CBRP shall be implemented upon approval by the Regional Board.

c. Should the process set forth in subdivision, b, of this section not be completed by December 31, 2015, then the urban wasteload allocations for dry weather conditions specified in the MSAR-TMDL shall become the final numeric WQBELs for indicator bacteria in Dry Weather Conditions, effective January 1, 2016 as follows:

i. Wasteload Allocation for Fecal Coliform from Urban Sources in Dry Weather Conditions (April 1st through October 31st)[50]

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. Wasteload Allocation for *E. Coli* from Urban Sources in Dry Weather Conditions (April 1st through October 31st)

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.

3. Final WQBELs for MSAR Bacterial Indicator TMDL under WET Weather Conditions (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 water quality-based effluent limits for wet weather conditions by that date, then the urban wasteload allocations specified in the MSAR-TMDL for wet weather conditions (November 1st through March 31st) will automatically become the final numeric water quality-based effluent limits for the MSAR Permittees on January 1, 2026.

4. Big Bear Lake Nutrient TMDL for Dry Hydrological Conditions

a. The City of Big Bear Lake, the County of San Bernardino and San Bernardino County Flood Control District (the Big Bear Lake MS4 Permittees) shall implement BMPs designed to assure continued compliance with the following urban wasteload allocation for phosphorus during dry hydrological conditions[51].

Total Phosphorus (lbs/yr)[52] = 475 (Compliance to be achieved by December 31, 2015)

b. The Big Bear Lake MS4 Permittees shall implement BMPs in the watershed so as not to exceed the urban WLA.for phosphorus.

c. The Big Bear Lake MS4 Permittees, individually or collectively, or in collaboration with the Big Bear TMDL Task Force, shall implement the approved (Regional

[50]The fecal coliform WLA becomes ineffective upon the replacement of the REC1 fecal coliform objectives in the Basin Plan by approved REC1 objectives based on *E. Coli.*

[51]The Big Bear Lake MS4 Permittees are already meeting the WLAs. The TMDL for Dry Hydrological Conditions does not specify nutrient reductions from external watershed sources, including urban discharges (WLA), resorts and open space/forested lands (LAs), these external load dischargers are still responsible for reducing their contributions to the internal nutrient loads, which are lake sediment and macrophytes.

[52] Specified as an annual average for dry hydrological conditions.

Board Resolution No. R8-2008-0070) Big Bear Lake In-lake Nutrient Monitoring Plan dated November 30, 2007, or any lawfully approved amendments thereto. Annual Reports shall be submitted by February 15 of each year.

d. The Big Bear Lake MS4 Permittees, individually or collectively, or in collaboration with the Big Bear TMDL Taskforce, shall implement the approved (Regional Board Resolution No. R8-2009-0043) Big Bear Lake Watershed-wide Nutrient Monitoring Plan (May 2009) in accordance with the schedules specified in Resolution No. R8-2009-0043, or any lawfully approved amendments thereto. Annual Reports shall be submitted by February 15 of each year.

e. No later than February 26, 2010, the Big Bear Lake MS4 Permittees, individually or collectively, or in collaboration with the Big Bear TMDL Task Force, shall submit for approval a plan to evaluate the applicability and feasibility of various in-lake treatment technologies to control noxious and nuisance aquatic plants as described in Task 6C of the BBL-TMDL. The plan shall also include a description of the monitoring conducted and proposed to track aquatic plant diversity, coverage, and biomass. The monitoring data should address, at a minimum, progress toward achieving the numeric targets for macrophyte coverage and percentage of nuisance aquatic vascular plant species. The final approved plan shall be implemented in accordance with the approved schedule.

f. No later than March 31 2010, the Big Bear Lake MS4 Permittees, individually or collectively, or in collaboration with the Big Bear TMDL Task Force, shall submit for approval a plan and schedule for updating the existing Big Bear Lake watershed nutrient model and the Big Bear Lake in-lake nutrient model as described in Task 6A of the BBL TMDL. The plan and schedule must take into consideration additional data and information that are or will be generated from the required TMDL monitoring programs as described in c and d above. The final plan shall be implemented in accordance with the approved schedule.

g. No later than April 15, 2010, the Big Bear Lake MS4 Permittees, individually or collectively, or in collaboration with the Big Bear TMDL Task Force shall submit for approval a proposed plan and schedule for in-lake sediment nutrient reduction for Big Bear Lake as described in Task 6B of the BBL TMDL. The proposed plan shall include an evaluation of the applicability and feasibility of various in-lake treatment technologies to support development of a long-term strategy for control of nutrients from the sediment. The submittal shall also contain a proposed sediment nutrient monitoring program to evaluate the effectiveness of any strategies implemented. The final plan shall be implemented in accordance with the approved schedule.

h. The plans submitted in e, f, and g above comprise Task 6 of the BBL TMDL –the Big Bear Lake – Lake Management Plan. In addition, the plans submitted in e, f, and g above also must also address the following, either individually or holistically:

1. The plan shall be based on identified and acceptable goals for lake capacity, biological resources and recreational opportunities. Acceptable goals shall be identified in coordination with Regional Board staff and other responsible agencies, including the California Department of Fish and Game and the U.S. Fish and Wildlife Service.

2. The plan shall include a proposed plan and schedule for the development of biocriteria for Big Bear Lake. This is intended to complement Regional Board efforts to develop biocriteria.

3. The plan must identify a scientifically defensible methodology for measuring changes in the capacity of the lake.

4. The proposed plan shall identify recommended short and long-term strategies for control and management of sediment and dissolved and particulate nutrient inputs to the lake to the extent that the permittees are responsible for these inputs over and above that which would occur naturally.

5. The plan shall also integrate the beneficial use map developed pursuant to the Regional Board's March 3, 2005, Clean Water Act Section 401 Water Quality Standards Certification for Big Bear Lake Nutrient/Sediment Remediation Project. The purpose of the beneficial use map is to correlate beneficial uses of the lake with lake bottom contours. The map is expected to be used in regulating future lake dredge projects to maximize the restoration and protection of the lake's beneficial uses.

i. The Big Bear Lake – Lake Management Plan shall be implemented upon Regional Board approval. Once approved, the plan shall be reviewed and revised as necessary at least once every three years. The review and revision shall take into account assessments of the efficacy of control/management strategies implemented and relevant requirements of new or revised TMDLs for Big Bear Lake and its watershed. Annual Reports shall be submitted by February 15 of each year.

j. The Big Bear Lake MS4 Permittees, individually or collectively, or in collaboration with the with the Big Bear TMDL Task Force shall submit an annual report by February 15 of each year summarizing all relevant data from both water quality monitoring programs and the Lake Management Plan as described in c, d, e, f, g, and h above and evaluating compliance with the WLA using the modeling tools developed pursuant to paragraph k, below.

k. Continued compliance with the WLA will be determined by watershed modeling. By March 31, 2010, the Big Bear Lake MS4 Permittees shall submit a final watershed modeling plan that is ready to be implemented and that details how the WLA will be determined and evaluated in future years. Upon approval by the

Regional Board, this watershed modeling plan shall be used to determine compliance with the WLA. The Big Bear Lake MS4 Permittees shall select a watershed model that best fits the conditions they are modeling and document the basis for that selection. Data collected under the approved watershed monitoring program shall be evaluated by the Big Bear Lake MS4 Permittees to determine if it falls within the range of dry hydrological conditions as specified in the Nutrient TMDL. The Big Bear Lake MS4 Permittees shall utilize data collected from the monitoring locations specified in the watershed monitoring program approved on May 22, 2009, as well as any other data that are deemed necessary to calibrate and validate the watershed model. The Big Bear Lake MS4 Permittees will document the basis for the selection of the model, the data evaluation and selection process, and the model calibration/validation process. The Big Bear Lake MS4 Permittees or the Big Bear Lake Task Force, shall provide the results of the first model update by February 15, 2011.

l. The Big Bear Lake MS4 Permittees shall revise the Municipal Storm Water Management Plan (MSWMP), Water Quality Management Plan (WQMP) and Local Implementation Plans (LIP) as necessary to implement the plans submitted pursuant to paragraphs c, d, e, f, and g of this section no later than 180 days after the Regional Board approves these plans. A summary of any such revisions shall be included in the area-wide annual report due November 15 of each year.

m. If water quality monitoring data and related modeling analyses indicate that the urban wasteload allocation for total phosphorus is being exceeded during dry hydrological conditions despite implementation of the lake management plan and the MSWMP and other requirements of this Order, the Big Bear Lake MS4 Permittees shall comply with the following procedure:

1. Each Big Bear Lake MS4 Permittee upstream of the monitoring locations where exceedances appear to be occurring shall evaluate and characterize discharges from its significant outfall locations.

2. The Big Bear Lake MS4 Permittees shall submit a report with proposed actions to the Executive Officer that describes the BMPs that are currently being implemented and any additional BMPs that will be implemented to reduce the controllable sources of phosphorus causing the exceedances of the urban wasteload allocation for total phosphorus. The report must be submitted as part of the annual report due in November 15 of each year.

n. **Storm Water Program Modification**: The Big Bear Lake MS4 Permittees shall revise their LIPs, as needed, to incorporate the requirements from TMDL implementation activities. These revisions shall include: (1) the results of the nutrient monitoring programs; (2) an evaluation of the effectiveness of the control measures in meeting the phosphorus WLAs; (3) any additional control measures

proposed to be implemented if the WLA or numeric targets are exceeded, including control measures for controlling nutrient inputs from new developments and/or new sources; and (4) a progress report evaluating progress towards meeting the WLAs (pre-compliance evaluation monitoring[53]).

5. Knickerbocker Creek Sole Source Pathogen Investigation and Control

a. The City of Big Bear Lake shall continue to participate in and implement the January 2008 Phase 2 Monitoring and Reporting Program in accordance with the agreed sampling locations, parameters, schedule, and protocol.

b. The City of Big Bear Lake shall annually review and revise, if necessary, the control measures implemented and undertake an iterative approach until water quality objectives within Knickerbocker Creek are attained, unless it can be demonstrated that the pathogen sources are from uncontrollable sources.

c. The City of Big Bear Lake shall continue to work with Regional Board staff and the Storm Water Quality Standards Task Force to review and update designated uses and related water quality objectives for Knickerbocker Creek. This may result in different water quality objectives for bacteria.

6. Big Bear Lake Mercury TMDL

Pending adoption of the Mercury TMDL, the City of Big Bear Lake shall participate in the development and implementation of monitoring programs and control measures, including any BMPs that the City is currently implementing or proposing to implement.

7. Compliance with WLAs

The determination of compliance with the WLAs shall be based on implementation of BMPs as specified in the implementation plans for the approved TMDLs or based on plans developed as per the approved TMDLs. The Permittees obligation to meet the WLAs is met if the water quality standards in the impaired receiving waters are met through implementation of control measures approved by the Regional Board.

VI. RECEIVING WATER LIMITATIONS

A. Discharges from the MS4s shall not cause or contribute to exceedances of receiving water quality standards (designated beneficial uses and water quality objectives) contained in Chapter 4 of the Basin Plan, and amendments thereto, for surface or groundwater.

B. The MSWMP and its components, including LIPs shall be designed to achieve compliance with receiving water limitations consistent with the MEP standard. It is

[53]Pre-compliance evaluation monitoring is monitoring conducted prior to the compliance date to evaluate effectiveness of pollution reduction efforts.

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 VI.A of this Order through timely implementation of control measures and other actions to reduce pollutants in urban and storm water runoff in accordance with the MSWMP and its components and other requirements of this Order, including any modifications thereto

D. 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 either by phone or by e-mail and, thereafter submit a report within 30 days (or if approved by the Executive Officer, this report may be incorporated into the annual report) to the Executive Officer for review and approval. At a minimum, the report shall:

   a. Describe BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce those pollutants that are causing or contributing to the exceedance of water quality standards.

   b. Address the cause of the impairment or exceedance, and the technical and economic feasibility of control actions available to the Permittees to reduce or eliminate the impairment or exceedance consistent with the MEP standard.

   c. Include an implementation schedule.

   d. Contain a comparative analysis of monitoring data to the USEPA Multi-Sector Permit Parameter Benchmark Values and applicable water quality objectives for inland surface streams as specified in Chapter 4 of the Basin Plan.

   e. A status report on the effectiveness of the pollution source investigation and control plan implementation to address exceedance of water quality objectives or elevated pollutant levels above benchmark values may be incorporated in the annual report unless the Executive Officer directs a different submittal date. The transmittal letter shall indicate that the annual report contains a description of additional BMPs proposed, pollution investigation report, and/or pollution source investigation and control plan.

E. The Executive Officer may require modifications to the plan and/or report. The Permittees shall submit any modifications required by the Executive Officer within 30 calendar days of notification. The plan and/or report shall be deemed acceptable if the Executive Officer does not respond with requested modifications within 30 days of the submittal date.

F. Within 60 calendar days following the Executive Officer's approval of the plan and/or report described above (or within 60 days following the date the plan and/or report were deemed acceptable due to lack of response from the Executive Officer), the Permittees shall revise the storm water management programs (MSWMP and LIP) and monitoring program to incorporate the additional BMPs that will be implemented, the implementation schedule, and any additional monitoring required.

G. Permittees must implement the revised the MSWMP, the LIP and the monitoring and reporting programs in accordance with the schedule approved by the Executive Officer.

H. So long as the Permittees have complied with the procedures set forth above and are implementing the revised LIP, MSWMP, and monitoring program, 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.

I. Nothing in Section VI.D must prevent the Regional Board from enforcing any provision of this Order while the Permittee prepares and implements the above programs.

VII. LEGAL AUTHORITY/ENFORCEMENT

A. The Permittees shall maintain adequate legal authority to control the discharge of pollutants to their MS4s through ordinance, statute, permit, contract or similar means and enforce these authorities. This legal authority must, at a minimum, include and authorize the Permittees to:

1. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits. The Permittee must have authority to enter, sample, monitor, inspect, take measurements, photographs, videos, review and copy records, and require reports from industrial, commercial, and construction sites discharging into their MS4s;

2. Recover its cost to correct a discharger's significant non-compliance or to respond to immediate and serious threat to water quality violations through various mechanisms, such as forfeiture of permit deposits, trust funds/bonds or other short-term funding sources to allow Permittees to immediately address and remedy serious water quality violations at construction, industrial, or commercial sites;

3. Require the use of BMPs to prevent or reduce the discharge of pollutants into MS4s;

4. Require documentation on the effectiveness of BMPs implemented to reduce the discharge of pollutants to the MS4s;

5. Prohibit the disposal of wastes onto public or private land that may cause water quality concerns, unless permitted by Waste Discharge Requirements (WDR) or waiver by the Regional Board;

6. The Permittees' storm water ordinances or other local regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include but are not limited to: verbal and/or written warnings, notice of violation or non-compliance, monetary penalties, non-monetary penalties, bonding requirements, stop work or cease and desist Orders and/or permit denials/revocations/stays for non-compliance, civil or criminal prosecution. 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 Permittees shall document progressive and decisive enforcement actions against violators of their storm water codes and ordinances in accordance with the formalized enforcement procedures developed by the Management Committee.

C. The Permittees shall use the most effective tool(s) at their disposal (such as Stop Work Orders and suspended inspections) to achieve immediate compliance. Permittees must have the ability to enforce any violations of the Stop Work Order through either an automatic fine or other effective means.

D. Within three (3) years of adoption of this Order, the Permittees shall implement fully adopted ordinances that would specify control measures for known pathogen or bacterial sources such as animal wastes if those types of sources are present within their jurisdiction.

E. The Permittees shall continue to provide notification to Regional Board staff of storm water related information obtained during site inspections of industrial and construction sites regulated by the Statewide General Storm Water Permits or sites which should be regulated under the State's General Permits. The notification should include any observed violations of the General Permits or local requirements, prior history of violations, any enforcement actions taken and will be taken by the Permittees, and any other relevant information.

F. The Permittees shall annually notify owners of other MS4 systems outside the Permittees' jurisdiction, regarding the regulatory requirements for control of pollutants in MS4 discharges (including relevant requirements from the MSWMP and WQMP), where feasible, and consistent with the MEP standard. The Permittees will also send these notifications to the Regional Board. The Permittees shall specify, in the LIP, the mechanisms or procedures to control the contribution of pollutants into their MS4s prior to accepting connections from owners of other MS4 systems outside the Permittees' jurisdiction. At a minimum, the Permittees shall notify these owners of other MS4 systems outside their jurisdiction of the requirement to comply with the post-construction standard in the State's General Construction Permit (Order No. 2009-0009-DWQ). A copy of the notification shall be provided to the Regional Board.

G. The Permittees shall annually review their water quality ordinances and evaluate their effectiveness 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):

1. Sewage (also prohibited under the Statewide SSO Order[54]);
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;

[54]State Board WQO No. 2006-0003.

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[55];
7. Discharges of runoff from the washing of toxic materials[56] 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.

H. Each Permittee shall include in its LIP the legal authorities and mechanisms used to implement the various program elements required by this Order to properly manage, reduce and mitigate potential pollutant sources within its jurisdiction. The LIP shall include citations of appropriate local ordinances, identification of departmental jurisdictions and key personnel in the implementation and enforcement of these ordinances. The LIP shall include procedures, tools and timeframes for progressive enforcement actions and procedures for tracking compliance.

I. The Permittees shall enforce their ordinances and permits at all construction sites, industrial facilities and commercial facilities as necessary to maintain compliance with this Order. Sanctions for non-compliance shall include: monetary penalties, bonding requirements and/or permit denial or revocation.

J. Within 12 months of adoption of this Order, each Permittee shall submit a certification 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. A copy of the certification shall also be placed in the LIP. Those Permittees who have already complied with this requirement during the third-term permit need not submit additional certification statements.

K. Annually thereafter, Permittees shall review adequacy of their ordinances, implementation and enforcement response procedures with respect to the above items. The findings of the reviews, along with supporting details and recommended corrective actions and schedules shall be submitted as part of the annual report for the corresponding reporting period. The Permittees' LIPs shall be updated accordingly.

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[55] 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.

[56] Toxic material is a chemical or a mixture that may present an unreasonable risk of injury to health or the environment.

VIII. ILLICIT DISCHARGES (ID)/ILLEGAL CONNECTIONS (IC); LITTER, DEBRIS AND TRASH CONTROL

A. The Permittees shall continue to prohibit all illegal connections to the MS4s through their ordinances, inspections, monitoring programs, and enforcement actions. The Permittees shall develop a pro-active IC/ID or illicit discharge detection and elimination program (IDDE) using the Guidance Manual for Illicit Discharge, Detection, and Elimination by the Center for Watershed Protection[57] or any other equivalent program. Any illegal connections identified by routine inspections, the IDDE program, or dry weather screening and/or monitoring shall be investigated and eliminated or permitted within 120 days of discovery.

B. The Permittees' IDDE program shall specify a procedure to conduct focused, systematic field investigations, outfall reconnaissance survey, indicator monitoring, and tracking of discharges to their sources[58]. The IDDE program(s) shall be linked to urban watershed protection efforts including: a) the use of GIS maps of the Permittees' conveyance systems to track sources ; b) aerial photography to detect IC/IDs; b) municipal inspection programs of construction, industrial, commercial, storm drain systems, municipal facilities, etc.; c) analysis of watershed monitoring and other indicator data; d) watershed education to educate the public about illegal discharges; e) pollution prevention for generating sites; f) stream restoration efforts/opportunities; and g) rapid assessment of stream corridors to identify dry weather flows and illegal dumping.

C. The LIP shall identify the staff positions responsible for different components of the IDDE program.

D. The Permittees shall maintain a database of permitted and unpermitted connections, routine inspections and dry weather monitoring. This information shall be updated on an ongoing basis and submitted with the annual report.

E. The Permittees shall control, consistent with the MEP standard, the discharge of spills, leaks, or dumping of any materials other than storm water and authorized non-storm water per Section V, above, into the MS4s. All reports of spills, leaks, and/or illegal dumping shall be promptly investigated and reported as specified under Section XVII (Notification Requirements).

F. The Permittees shall continue to characterize trash, determine its main source(s) and develop and implement appropriate BMPs and control measures to reduce and/or to eliminate the discharge of trash and debris to Waters of the U.S. to the MEP. These control measures and their effectiveness in reducing trash shall be reported in the annual report.

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[57] 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).

[58] 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.

IX. SEWAGE SPILLS, INFILTRATION INTO MS4 SYSTEMS FROM LEAKING SANITARY SEWER LINES, SEPTIC SYSTEM FAILURES, AND PORTABLE TOILET DISCHARGES

A. The Permittees shall provide local sanitation districts 24-hour access to the MS4s to address sewage spills and shall provide updated contact information to enable such access. The Permittees shall work cooperatively with the local sewering agencies to determine and control the impact of infiltration from leaking sanitary sewer systems on storm water quality. 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.

B. Permittees who are regulated under the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ, (SSO Order), shall continue to comply with that Order to control sanitary system overflows.

C. The Principal Permittee shall collaborate with the local sewering agencies to review and revise, as needed, the Sanitary Sewer Overflow Unified Response Plan to ensure its consistency with the SSO Order.

D. The interagency or interdepartmental sewer spill response coordination and responsibility within each Permittee's jurisdiction shall be described in the LIP.

E. The Permittees shall implement management measures and procedures to prevent, respond to, contain and clean up all sewage and other spills that may be discharged into their MS4s. Management and/or preventative measures shall also be implemented for sources including portable toilets and failing septic systems that are causing or contributing to urban and storm water runoff pollution problems in their jurisdictions.

F. Within 2 years of adoption of this Order, Permittees with septic systems in their jurisdiction shall develop an inventory of septic systems within its jurisdiction and establish a program to ensure that failure rates are minimized pending adoption of regulations as per Assembly Bill 885[59] regarding onsite waste water treatment systems.

X. MUNICIPAL INSPECTION PROGRAMS

A. General Requirements

1. The Permittees shall continue to maintain and update the inventory of all construction, industrial and commercial facilities within their jurisdiction that have a reasonable potential to discharge pollutants to the MS4 regardless of whether the sites are subject to the California Statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities or the California Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities or other individual NPDES permit or Waste Discharge Requirements. The Permittees may use the MS4 Solutions or equivalent database for this purpose (see X.A.2., below).

[59] http://www.waterboards.ca.gov/water_issues/programs/septic_tanks/

2. The Permittees shall conduct regular inspections of construction sites, industrial and commercial facilities to evaluate compliance with applicable municipal ordinances, local permits, Storm Water Management Plans, and Water Quality Management Plans (see Sections B, C, and D, below for frequency of inspections). Inspections shall review pollution control practices, implementation and maintenance of pollution control measures, material handling and waste disposal practices, spill prevention and response programs and owner/operator knowledge of environmental laws and regulations, including local ordinances. The Permittees shall enforce their ordinances and permits at all construction, industrial, and commercial facilities in a fair, firm and consistent manner.

3. The municipal inspection program activities shall be documented in an electronic database. The database system must include relevant information on ownership, Standard Industrial Classification (SIC) codes, General Permit Waste Discharge Identification (WDID) number (if any), size, Geographic Information System (GIS) data in NAD83/WGS84[60] compatible formatting with latitude/longitude in decimal degrees, and other pertinent details describing the nature of activities at the site. The information shall be maintained in the MS4 Solution Database or equivalent internet accessible database. In addition to the facility information, the inspection information shall include: date of inspection; inspectors and facility personnel present; site conditions, any observed non-compliance; enforcement actions and/or corrective actions required and schedules for corrective actions; and date of full compliance. The database shall be updated at least once each year and an electronic copy provided to the Regional Board with each annual report.

4. Within 18 months of adoption of this Order, the Principal Permittee, in coordination with the Co-Permittees shall develop a risk-based scoring system to prioritize construction, industrial and commercial facilities and to determine the frequency of inspections. The scoring system shall consider factors including, but not limited to: the hazardous nature of materials used on site; potential for erosion and pollutant discharges, particularly such materials as pre-production plastic (nurdles) or pollutants for which the receiving water is impaired; site size and location including proximity to receiving water, history of spills and leaks; use of pollution control and prevention measures; and compliance history. The risk-based scoring system shall include criteria to identify the facilities as high, medium or low risk and shall be submitted to the Executive Officer for approval. The electronic database submitted with the annual report (see X.A.3, above) shall include the risk-based scores for each facility. The facility scores must be reviewed and updated annually, if necessary.

5. Prior to development and implementation of the risk-based scoring system, construction, industrial and commercial sites shall be inspected in accordance with the prioritization scheme set forth in the third term permit.

6. Any site found in significant non-compliance with the Statewide General Permits or the MS4 Permit is deemed a high priority site and must be contacted or inspected at

[60] 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.

least once per month until full compliance is achieved.

7. The Permittees shall verify during inspections and/or prior to local permit issuance whether a site has obtained necessary permit coverage under one or more of the Statewide General Permits, an individual NPDES permit, Waste Discharge Requirements, and/or 401 Certification. Local permits, certificates of occupancy, or other approvals shall not be granted until proof of coverage under the applicable statewide permit is verified.

8. The Permittees shall deem facilities operating without a proper permit to be in significant non-compliance. Appropriate enforcement measures shall be implemented including a time schedule to obtain coverage, or suspension of business license until evidence of permit coverage is provided. Non-filers shall be reported within 14 calendar days to the Regional Board by electronic mail or other written means. The Permittees shall include in their LIP the method for verification of permit coverage and for notification of non-filers to the Regional Board.

9. Permittees shall maintain hard or electronic copies and make available upon request all information related to their inspections, including inspection reports, photographs, videotapes, enforcement actions, notices of correction issued to dischargers and other relevant information. This information shall be linked to the electronic database identified in Section X.A.3 above.

10. The 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[61].

11. Each Permittee shall respond to complaints received from third parties in a timely manner to ensure that the construction, industrial and commercial sites are not a source of pollutants in the MS4s and the receiving waters. Each Permittee shall implement a system of prioritizing the complaints based on threat to the environment (water quality/public health) and an appropriate response time based on this prioritization.

12. Each Permittee shall document, evaluate, and annually report the effectiveness of its enforcement procedures in achieving prompt and timely compliance. When timely compliance is not achieved, the Permittee shall take appropriate corrective measures to immediately prevent or abate the discharge of pollutants into its MS4 system.

13. Where storm water related inspections and/or enforcement required by this Order are carried out on behalf of the Permittee by other agencies or departments such as: the County Public Health, county and/or local fire departments, code enforcement, industrial pretreatment, building and safety, etc., the Permittee shall monitor and annually evaluate and report adequacy of such programs in complying with this Order.

[61] 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.

14. All inspectors conducting storm water inspection as required in this Order shall be trained in accordance with the training requirements specified in Section XVI.

B. Construction Sites

1. Each Permittee shall include in the electronic database identified in Section X.A.3 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.
2. Prior to approval of the risk-based scoring and prioritization system, the Permittees shall continue to prioritize construction sites within its jurisdiction as a high, medium or low threat to water quality. This prioritization 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 50 acres and greater; sites over 1 acre that are tributary to Clean Water Act section 303(d) waters listed for sediment or turbidity impairments; site specific characteristics[62], and any other relevant factor. At a minimum, medium priority construction sites shall include: sites between 10 to less than 50 acres of disturbed soil. Upon approval of the risk-based scoring system, the sites shall be categorized as high, medium, or low risk based on the risk-based scores.
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.). The Permittees shall develop a checklist for conducting 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 (NOI) or Waste Discharge Identification No.) during the initial inspection. Permit coverage shall also be confirmed in the event of a change in ownership.
   b. A review of the Erosion and Sediment Control Plans (ESCP) to ensure that the BMPs implemented on-site are consistent with the appropriate phase of construction (Preliminary Stage, Mass Grading Stage, Streets and Utilities Stage, Vertical Construction Stage, and Post-Construction Stage).
   c. Visual observations for non-storm water discharges, potential illicit connections, and potential pollutant sources.
   d. Determination of compliance with local ordinances, permits, Water Quality Management Plans and other requirements, including the 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. In evaluating BMP effectiveness, the Permittees may consider applicable action levels (AL) and/or numeric effluent limits (NEL)

[62] The approved General Construction Permit Order No. 2009-0009-DWQ includes risk-based characterization of construction sites based on site-specific conditions.

promulgated by the State or USEPA.

4. At a minimum, the inspection frequency shall include the following:
   a. During the wet season[63] (i.e., Oct 1 through May 31 of each year), all high priority (or high risk) sites are to be inspected, in their entirety, once a month. All medium priority (or medium risk) sites are to be inspected at least twice during the wet season. All low priority (or low risk) 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 shall be maintained until BMPs and BMP maintenance are brought into compliance.
   b. During the dry season (i.e., 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.
5. The Permittees' implementation of their construction storm water program shall be consistent with the latest version of the statewide General Construction Permit and all applicable provisions of the federal effluent limitations guidelines.

C. Industrial Facilities

1. Prior to approval of the risk-based scoring and prioritization system, the Permittees shall continue to prioritize industrial facilities within its jurisdiction as high, medium, or low threat to water quality. The prioritization of these facilities should be based on such factors as type of industrial activities (SIC codes)[64], 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. 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 that handle or generate pollutants for which the receiving water is impaired, facilities that have a demonstrated or significant potential to release pre-production plastic or nurdles into the environment, and facilities with a high potential for or history of unauthorized, non-storm water discharges. Upon approval of the risk-based scoring system, the facilities shall be categorized as high, medium or low risk.
2. Each Permittee shall conduct industrial facility inspections for compliance with its ordinances, permits and this Order. Industrial inspections shall include: a review of the site's material and waste handling and storage practices; a review of written documentation of pollutant control BMP implementation and maintenance procedures; digital photographic documentation of water quality violations, and/or evidence of past or present unauthorized-, non-storm water discharges; and enforcement actions issued at the time of inspection if necessary. A summary of

[63] Wet and dry season for TMDL compliance evaluation will be the months as defined in the TMDL development documents and implementation plans. See Glossary, Attachment 4.

[64] Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;

inspections shall be included in the annual report and shall document the rational for downgrading or upgrading the priority ranking of industrial facilities.

3. All high priority (or high risk) industrial facilities are to be inspected at least once a year; all medium priority (or medium risk) sites are to be inspected at least once every two years; and all low priority (or low risk) 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, appropriate enforcement actions shall be taken and a re-inspection frequency adequate to bring the site into full compliance must be maintained.
4. Each Permittee shall require industrial facilities to implement source control and pollution prevention measures consistent with the BMP Fact Sheets developed by the Permittees.

D. Commercial Facilities

1. All of the following types of commercial facilities are deemed to have a reasonable potential to discharge pollutants to the MS4s. These types of facilities shall be included in the database identified in Section X.A.3. Commercial facilities may include, but may not be limited to[65]:

   a. Transport, storage or transfer of pre-production plastic pellets;
   b. Automobile mechanical repair, maintenance, fueling or cleaning;
   c. Automobile and other vehicle body repair or painting;
   d. Automobile impound and storage services;
   e. Airplane repair, maintenance, fueling or cleaning;
   f. Marinas and boat repair, maintenance, fueling or cleaning;
   g. Equipment repair, maintenance, fueling or cleaning;
   h. Pest control service facilities;
   i. Eating or drinking establishments, including food markets and restaurants;
   j. Cement mixing, concrete cutting, masonry facilities;
   k. Building materials retailers and storage facilities;
   l. Portable sanitary service facilities;
   m. Painting and coating;
   n. Animal facilities such as petting zoos and boarding and training facilities;
   o. Nurseries, greenhouses, botanical or zoological gardens;
   p. Landscape and hardscape installation;
   q. Pool, lake and fountain cleaning; and
   r. Golf courses, parks and other recreational areas/facilities;

2. The Permittees shall continue to develop BMPs applicable for each of the commercial operations described above.

[65] Mobile cleaning services are addressed in X.D.6 and 7, below.

3. Prior to approval of the risk-based scoring system, each Permittee shall conduct inspections of commercial facilities within its jurisdiction in accordance with the prioritization scheme set forth in the third-term permit.
4. All high priority (or high risk) facilities shall be inspected at least once per year; all medium priority (or medium risk) facilities shall be inspected at least every two years; and all low priority (or low risk) facilities 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.
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, appropriate enforcement action shall be taken and documented to bring the site into compliance.
6. Within 36 months of adoption of this Order, the Principal Permittee, in coordination with the Co-Permittees, shall notify all mobile businesses operating within the Permit area regarding the minimum source control and pollution prevention measures that they must develop and implement. For purposes of this Order, mobile businesses include: mobile auto washing/detailing; equipment washing/cleaning; carpet, drape, and furniture cleaning; and mobile high pressure or steam cleaning. The mobile businesses shall be required to implement appropriate control measures within 3 months of being notified of the requirements.
7. Within 36 months of adoption of this Order, the Principal Permittee, in coordination with the Co-Permittees, shall develop an enforcement strategy to address mobile businesses. Each Permittee shall also distribute the BMP Fact Sheets to the mobile businesses identified for notification as required in Section X.D.6, above. At a minimum, the mobile business Fact Sheets/training program should include: laws and regulations dealing with urban runoff and discharges to storm drains; appropriate BMPs and proper procedure for disposing of wastes generated from each mobile business.
8. The Principal Permittee, in coordination with the Co-Permittees shall continue to maintain a restaurant inspection program, or coordinate and collaborate with the San Bernardino County Public Health Agency's restaurant inspection program. The restaurant inspection program shall, at a minimum, address:
    a. Oil and grease disposal to verify that these wastes are not poured into a trash bin, storm sewers, parking lot, street or adjacent catch basin;
    b. Trash bin areas to verify that these areas are clean, the bin lids are closed, and the bins are not used for disposing of liquid wastes;
    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 into those areas;
    d. Parking lots 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).

9. All violations of the Water Quality Ordinance shall be enforced by the Permittees and all violations of the Health and Safety Code should be enforced by the Public Health Agency.

E. Residential Program

1. Within 36 months of adoption of this Order, each Permittee shall, consistent with the MEP standard, develop and implement a residential program designed to reduce the discharge of pollutants from residential facilities to the MS4s and to prevent discharges from the MS4s from causing or contributing to exceedances of water quality standards in the receiving waters.
2. The Permittees shall 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 to disseminate the latest research information from organizations such as the Inland Empire Resource Conservation District[66], The Land Trust Alliance, The USDA Natural Resources Conservation Service, USDA's Backyard Conservation Program[67], and others.
3. Each Permittee shall document its residential program in its LIP.
4. The Permittees shall continue to, collectively or individually, facilitate the proper collection and management of used oil, toxic and hazardous materials, and other household wastes. Such facilitation shall 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. Each Permittee shall continue these programs and periodically evaluate their effectiveness in reducing discharges of pollutants into the MS4s.
5. The Permittees shall develop and implement control measures for common interest areas and areas managed by homeowner associations or management companies. This may include development and promotion of public education materials identifying BMPs for these common interest areas or HOA areas. The Permittees

[66] The District provides gardening and horticulture information appropriate for the area including native plant selection, backyard management, alternatives to pesticide, irrigation scheduling and composting.

[67] 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.

should evaluate the applicability of programs such as the Landscape Performance Certification Program[68] to encourage efficient water use and to minimize runoff[69].

6. 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[70].
7. 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.

XI. NEW DEVELOPMENT (INCLUDING SIGNIFICANT RE-DEVELOPMENT)

A. General Requirements:

1. Each Permittee shall continue to ensure (prior to issuance of any local permits or other approvals) that all non-Permittee construction sites that are one acre or greater, and sites less than one acre if part of a common plan of development have filed with the State Board a Notice of Intent for coverage under the State's General Construction Permit and have been issued a valid Waste Discharge Identification (WDID) number. Each Permittee shall describe its General Permit coverage verification procedures in its LIP.
2. Each Permittee shall ensure that the erosion and sediment control plans it approves include appropriate erosion and sediment control BMPs (e.g., erosion control measures for sloped or hill-side developments, ingress/egress controls, perimeter controls, run-on diversion, etc.) such that an effective combination of BMPs consistent with site risk is implemented through all phases of construction.
3. Each Permittee shall utilize the BMP studies conducted during the previous permit terms to determine the most appropriate erosion and sediment control BMPs. The conditions of approval shall require erosion and sediment control plans, SWPPPs, and WQMPs, as applicable. These documents shall specify the appropriate BMPs.
4. Each Permittee shall ensure, consistent with the maximum extent practicable standard, that runoff from development projects it approves, does not cause nuisance to adjoining or downstream properties and stream channels.
5. Each Permittee shall ensure, to the MEP, that urban runoff conveyance systems created resulting from development projects it approves are appropriately maintained consistent with Section XIII of this Order or are adequately maintained by a legally responsible party.

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[68] For example, see the Metropolitan Water District of Orange County's Evaluation of the Landscape Performance Certification Program, January 2004.

[69] The Residential Runoff Reduction Study, Municipal Water District of Orange County, Irvine Ranch Water District and Metropolitan Water District of Southern California, July 2004.

[70] Westpark Study, Municipal Water District of Orange County, Irvine Ranch Water District and Metropolitan Water District of Southern California, 2001.

6. Prior to accepting connections from owners of other MS4 systems outside the Permittees' jurisdiction, the Permittees shall notify these owners of other MS4 systems outside their jurisdiction of the requirement to comply with the post-construction standard in the State's General Construction Permit and the regulatory requirements for control of pollutants in MS4 discharges (including relevant requirements from the MSWMP and WQMP), where feasible, and consistent with the MEP standard. A copy of the notification shall be provided to the Regional Board.
7. Each Permittee shall ensure that appropriate control measures to reduce erosion and maintain stream geomorphology are included in the design for replacement of existing culverts or construction of new culverts and/or bridge crossings.
8. Each Permittee shall minimize the short and long-term adverse impacts on receiving water quality from public and private new development and significant re-development projects, as required in Section XI.D (Water Quality Management Plan), below, by continuing to review, approve, and verify implementation of project-specific WQMPs, emphasizing implementation of LID principles, where feasible, and addressing hydrologic conditions of concern, and long term operation and maintenance mechanisms prior to project closure or issuance of certificates of occupancy.
9. Each Permittee shall participate in the development of the Watershed Action Plan, described in Section B below, to integrate water quality, stream protection and stormwater management and re-use within the permitted area with land use planning policies, ordinances, and plans, as applicable, and consistent with the MEP standard.

B. **Watershed Action Plan**

1. The Permittees shall develop an integrated watershed management approach to improve integration of planning and approval processes with water quality and quantity control measures. Management of the water quality and hydrologic impacts of urbanization will be more effective whether managed on a per site, sub-regional or regional basis, if coordinated within the Watershed Action Plan. Pending completion of a Watershed Action Plan, management of the impacts of urbanization shall be accomplished using existing programs.
2. Within twelve months of adoption of this Order, each Permittee shall review the watershed protection principles and policies, specifically addressing urban and storm water runoff, in its planning procedures, including CEQA preparation, review and approval processes; General Plan and related documents including, but not limited to its Development Standards, Zoning Codes, Conditions of Approval, Development Project Guidance; and WQMP development and approval processes.
3. The Principal Permittee, in collaboration with the Co-Permittees, shall develop a Watershed Action Plan (WAP) that describes and implements the Permittees' approach to coordinated watershed management. The WAP shall improve coordination of existing programs and identify new and/or enhanced program elements as applicable. The objective of the WAP is to improve integration of water quality, stream protection, storm water management, water conservation and re-use, and flood protection, with land use planning and development processes. The WAP shall be developed in two phases:

a. Phase 1: within 12 months of adoption of this Order, the Principal Permittee, in coordination with the Co-Permittees shall:

   i. Identify program-specific objectives for the WAP; the objectives will include consideration of:

      1. The watershed protection principles specified in Section XI.C.3.a – g, below;

      2. The Permittee's planning and procedure review required in XI.B.2, above;

      3. Potential impediments to implementing watershed protection principles during the planning and development processes, including but not limited to LID principles and management of the impacts of hydromodification;

      4. Impaired waters [CWA § 303(d) listed] with and without approved TMDLs, pollutants causing impairment, monitoring programs for these pollutants, control measures, including any BMPs that the Permittees are currently implementing, and any BMPs the Permittees are proposing to implement. In addition, if a TMDL has been developed and an implementation plan is yet to be developed, the WAP shall specify that the responsible Permittees should develop constituent-specific source control measures, conduct additional monitoring and/or cooperate with the development of an implementation plan, where feasible, and consistent with the MEP standard.

   ii. Develop a structure for the WAP that emphasizes coordination of watershed priorities with the Permittees' LIPs via the areawide model LIP;

   iii. Identify linkages between the WAP and the SWQSTF, MSWMP, WQMP, the implementation of LID, and the TMDL Implementation Plans;

   iv. Identify other relevant existing watershed efforts (Chino Basin Master Plan, SAWPA's IRWMP, etc., and their role in the WAP;

   v. Ensure that the HCOC Map/Watershed Geodatabase is available to watershed stakeholders via the World Wide Web, and has incorporated the following information:

      1. Delineation of existing unarmored or soft-armored drainages in the permitted area that are vulnerable to geomorphological changes due to hydromodification and those channels and streams that are engineered, hardened, and maintained.

      2. GIS layers for known sensitive species, protected habitat areas, drainage boundaries, and potential storm water recharge areas and/or reservoirs;

      3. 303(d)-listed waterbodies and associated pollutants;

      4. Available and relevant regulatory and technical documents accessible via hyperlinks;

vi. Develop a schedule and procedure for maintaining the Watershed Geodatabase, and develop a draft schedule for expected enhancements to increase functionality;

vii. Review the Watershed Geodatabase with Regional Board staff from the Storm Water, TMDL, and Watershed Planning/ Program Sections, and other resource agencies, to verify attributes of the Geodatabase, including drainage feature stability/susceptibility/risk assessments, and the intended use of the Geodatabase to support regulatory processes such as WQMP approvals, Clean Water Act Section 401 Water Quality Standards Certifications (401 Certifications), and LID BMP feasibility evaluations;

viii. Identify potential causes of identified stream degradation including a consideration of sediment yield and balance on a watershed or subwatershed basis.

ix. Conduct a system-wide evaluation[71] to identify opportunities to retrofit existing storm water conveyance systems, parks, and other recreational areas with water quality protection measures, and develop recommendations for specific retrofit studies that incorporates opportunities for addressing applicable TMDL implementation plans, hydromodification management, and/or LID implementation within the permitted area.

x. Conduct a system wide evaluation to identify opportunities for joint or coordinated development planning to address stream segments vulnerable to hydromodification and coordinated re-development planning to identify restoration opportunities for hardened and engineered streams and channels. The WAP shall identify contributing jurisdictions and the stream segments that will benefit from this coordination.

xi. 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;

xii. Submit the Phase 1 components in a report to the Executive Officer for approval. The Report shall be deemed acceptable to the Regional Board if the Executive Officer submitted raises no written objections within 30 days of submittal. .

b. Phase 2: within 12 months of the approval by the Executive Officer of the Report from Phase 1, above, the Principal Permittee, in coordination with the Co-Permittees, shall:

i. Contingent upon consensus with Regional Board staff and other resource agencies as described in XI.B.3.a.vii, above, specify procedures and a schedule to integrate the use of the Watershed Geodatabase into the implementation of the MSWMP, WQMP, and TMDLs;

[71] For example, see the 2005 RBF Retrofit Study conducted for Orange County MS4 permittees.

ii. Develop and implement a Hydromodification Monitoring Plan (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.

iii. Develop and implement a Hydromodification Management Plan prioritized based on drainage feature/susceptibility/risk assessments and opportunities for restoration.

iv. Conduct training workshops in the use of the Watershed Geodatabase. Each Permittee must ensure that their planning and engineering staff attend a workshop.

v. Conduct demonstration workshops for the Watershed Geodatabase to be attended by appropriate upper-level managers and directors from each Permittee.

vi. 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 approval of regional treatment control BMPs. At a minimum, this information 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. The Permittees are encouraged to collaborate and work with other counties to facilitate and coordinate these recommendations.

vii. Implement applicable retrofit or regional treatment recommendations from the evaluation conducted in Section B.3.a.ix, above.

viii. Submit the Phase 2 components in a report to the Executive Officer. The submitted report shall be deemed acceptable to the Regional Board if the Executive Officer raises no written objections within 30 days of submittal.

4. Within three years of adoption of this Order, each Permittee shall review the watershed protection principles and policies in its General Plan or related documents (such as Development Standards, Zoning Codes, Conditions of Approval, Development Project Guidance) to determine consistency with the Watershed Action Plan. Each Permittee shall report the findings in the annual report along with a schedule for any necessary revision.

C. **Consideration of Watershed Protection Principles in California Environmental Quality Act (CEQA) and Planning Processes**:

1. The Permittees shall ensure that the direct, indirect, and cumulative water quality impacts of storm water and non-storm water runoff are properly considered and addressed in their land-use planning processes. The following potential water quality impacts shall be considered during the preparation and circulation of environmental documents prepared pursuant to CEQA:

   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 or 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.

   f. Potential for significant increases in erosion of the project site or surrounding areas.

2. For any project that may require a 401 Certification from the State, the Permittees shall 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

3. The Principal Permittee shall collaborate with the Co-Permittees to develop recommendations to resolve any impediments to implementing watershed protection principles during the planning and development processes, including LID principles and management of hydrologic conditions of concern (See Section E below). The Principal Permittee shall collaborate with the Co-Permittees to develop common principles and policies necessary for water quality protection. The watershed protection principles and policies should include the following:

   a. Avoid disturbance of natural water bodies, drainage systems and flood plains; conserve natural areas; protect slopes and channels; 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 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, stream habitat; minimize the quantity of storm water directed to impermeable surfaces and the MS4s; maximize the percentage of permeable surfaces to allow more percolation of storm water into the ground;

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

d. Use properly designed and well maintained 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.

g. Consider pollutants of concern (identified in the risk-based analysis provided in the 2006 ROWD, the annual reports and the list of impaired waterbodies (303(d) list)) and propose appropriate control measures.

4. Within 24 months following the review specified in B.2, above, each Permittee shall incorporate the following information into its LIP and its project approval process:

a. The Permittees shall identify and map in GIS format the natural channels, wetlands, riparian corridors and buffer zones and identify conservation and maintenance measures for these features. The Watershed Action Plan should include information needed for this effort. This requirement will be most effective if met through development of areawide HCOC maps or other joint efforts.

b. Each Permittee shall include in the LIP the applicable tools (such as ordinances, design standards, and procedures) used to implement green infrastructure/low impact development principles for public and private development projects.

c. For hillside development projects, each Permittee shall consider and facilitate application of landform grading techniques[72] and revegetation as an alternative to traditional approaches, particularly in areas susceptible to erosion and sediment loss.

5. Each Permittee shall provide Regional Board staff 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) Requirements[73]:

1. Each Permittee shall continue to require project-specific Water Quality Management Plans (WQMP) for priority projects listed under Section XI.D.4.a to i.

2. Within 18 months of adoption of this Order, the Principal Permittee shall coordinate the revision of the WQMP Guidance and Template to include new elements required under this Order.

[72] http://www.epa.gov/region3/mtntop/pdf/Appendixes/Appendix%20D%20Aquatic/Aquatic%2OEcosystem%20Enhanc.%20Symp/Proceedings/Support%20Info/Schor/Landform.pdf

[73] Priority projects are those listed under Section XI.D.4.a to i.

3. Each Permittee shall require submittal of a preliminary project-specific WQMP as early as possible during the environmental review or planning phase (land use entitlement). No building or grading permit shall be issued prior to approval of the final project–specific WQMP that is developed based on the preliminary project-specific WQMP and any recommended revisions, as appropriate.

4. The combination of site design/LID BMPs (where feasible), source control, and/or treatment control BMPs, including regional treatment systems, in project-specific WQMPS shall address all identified pollutants and hydrologic conditions of concern from new development and/or significant re-development projects for the categories of projects (priority projects) listed below:

   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 subject to discretionary approval of the Permittee. . 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. 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 or townhomes, condominiums, apartments, etc.), mixed-use, and public projects. This category includes development projects on public and 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 (with SIC code 5812) where the land area of development is 5,000 square feet or more.

   e. All hillside developments of 5,000 square feet or more which are located on areas with known erosive[74] 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[75] into environmentally sensitive areas (ESAs) 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

[74] See General Construction Permit Order No. 2009-0009-DWQ.

[75] Discharging directly means a drainage or conveyance which carries flows entirely from the subject development and not commingled with any other flows.

impaired waters.

g. 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.

h. Retail Gasoline Outlets (RGOs) that are either 5,000 sq feet or more, or have a projected average daily traffic of 100 or more vehicles per day.

i. Emergency public safety projects in any of the above-listed categories shall be excluded if the delay caused due the requirement for a WQMP compromises public safety, public health and/or environmental protection.

5. WQMPs shall include BMPs for source control, pollution prevention, site design, LID implementation, where feasible, (see Section E, below) and structural treatment control BMPs. WQMPs shall include control measures for any listed pollutant[76] 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 Permittees:

   a. Minimize contaminated runoff, including irrigation runoff, from entering the MS4s;

   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 Storm Water Quality Handbooks, Caltrans Storm Water Quality Handbook or other reliable sources.

6. Treatment control BMPs shall be 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 BMP design applies to BMPs where the primary mode of pollutant removal depends upon the volumetric capacity, such as detention, retention, and infiltration basins. These criteria specify the capture and infiltration or treatment of a percentile of the average annual rainfall volume (also referred to as percent capture ratio).

[76] For a waterbody listed under Section 303(d) of the Clean Water Act, the pollutant that is causing the impairment is the “listed pollutant”.

Volume–based BMPs shall be designed to infiltrate, harvest and use, filter, or treat either:

i. The volume of runoff produced from a 24-hour, 85th percentile storm event, as determined from the County of San Bernardino'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 Stormwater 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 BMP design applies to BMPs where the primary mode of pollutant removal depends upon the rate of flow thru the BMP, such as swales, sand filters, screening devices, and proprietary devices such as storm drain inserts.

Flow–based BMPs shall be designed to infiltrate, harvest and use, 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.

7. The obligation to install structural 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. All treatment control BMPs should be located as close as possible to the pollutant sources, should not be located within Waters of the U.S., and pollutant removal should be accomplished prior to discharge to Waters of the U.S. Regional treatment control BMPs shall be completed and operational prior to occupation of any of the priority project sites tributary to the regional treatment BMP.

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 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 to protect groundwater quality. The need for pre-treatment BMPs such as sedimentation or filtration should be evaluated prior to infiltration.

c. Adequate pretreatment of runoff prior to infiltration shall be required in gas stations and large commercial parking lots.

d. Unless adequate pre-treatment of runoff is provided prior to infiltration structural infiltration treatment BMPs must not be used for areas of industrial or light industrial activity[77], areas subject to high vehicular traffic (25,000 or more daily traffic); car washes; fleet storage areas; nurseries; or any other high threat to water quality land uses or activities~~.~~

e. Class V injection wells or dry wells must not be placed in areas subject to vehicular[78] repair or maintenance activities[79], 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.

f. Structural infiltration BMP treatment shall not be used at sites that are known to have soil and groundwater contamination.

g. Structural infiltration treatment BMPs shall be located at least 100 feet horizontally from any water supply wells.

h. The vertical distance from the bottom of any infiltration structural treatment 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.

i. Structural infiltration treatment BMPs shall not cause a nuisance or pollution as defined in Water Code Section 13050.

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[77] Unless a site assessment pursuant to criteria developed in Section XI.E.3 shows that site operations do not pose a threat to ground water.

[78] 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.

[79] United States Environmental Protection Agency, Office of Water, EPA 816-R-00-008, September 2000 State Implementation Guidance – (Revisions to the UIC Regulations for the Underground Injection Control Regulations for Class V Injection Wells, 64 FR 68546) indicate that these activities are prohibited from Class V Injection wells.

E. Low Impact Development (LID) and Hydromodification Management to Minimize Impacts from New Development / Significant Redevelopment

The objective of LID is to mimic pre-development site hydrology through technically and economically feasible source control and site design techniques. LID combines hydrologically functional site design with pollution prevention methods to compensate for land development impact on hydrology and water quality.

1. Within 18 months of adoption of this Order, each Permittee shall evaluate any potential barriers to implementing LID principles. This shall be done in conjunction with the requirements specified under Sections XI.B.3.a and XI.C.3. To facilitate implementation of LID BMPs, the Permittees should consider revising their ordinances, codes and building and landscape design standards. The Permittees shall promote green infrastructure/LID BMP implementation and identify the applicable LID principles in the project specific WQMP:

   a. Landscape designs that promote water retention and evapotranspiration such as 1 foot depth of compost/top soil in commercial and residential areas on top of 1 foot of decompacted subsoil, concave landscape grading to allow runoff from impervious surfaces, and water conservation by selecting native plants, weather-based irrigation controllers, etc.

   b. Allow permeable surface designs in low traffic roads and parking lots, where feasible. This may require land use/building code amendment.

   c. Allow natural drainage systems for street construction and catchments (with no drainage pipes), and allow grassy swales and ditches where feasible.

   d. Require parking lots to drain to landscaped areas to provide treatment, retention, or infiltration, where feasible.

   e. Reduce curb requirements, where feasible, where adequate drainage, conveyance, treatment and storage are available.

   f. Amend where feasible and practicable, land use/building codes to allow streets with no curbs and parking lots with no stop blocks to allow storm water to drain into landscaped areas.

   g. Require, where feasible, rainwater harvesting and use.

   h. Consider building narrow streets, alternatives to minimum parking requirements, etc.

   i. Consider vegetated landscape as an integral element of streets, parking lots, playground and buildings as a storm water treatment and retention system.

   j. Consider and facilitate application of landform grading techniques[80] and revegetation as an alternative to traditional approaches, particularly in areas susceptible to erosion and sediment loss such as hillside development projects,

[80] http://www.epa.gov/region3/mtntop/pdf/Appendixes/Appendix%20D%20Aquatic/Aquatic%2OEcosystem%20Enhanc.%20Symp/Proceedings/Support%20Info/Schor/Landform.pdf

k. Consider other site design BMPs identified in the WQMP Guidance and Template and not included above.

2. Consistent with the requirements of AB 1881, each Permittee is mandated to update its landscape ordinance. The bill requires the local agencies to adopt the State Model Water Efficient Landscape Ordinance[81] 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).

3. To reduce pollutants in urban runoff, address hydromodification, and manage storm water as a resource to the maximum extent practicable, WQMPs shall specify preferential use of site design BMPs that incorporate LID techniques 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) Mitigative measures (these are structural measures, such as, infiltration, harvesting and use, bio-treatment, etc.). The mitigative or structural site design BMPs shall also be prioritized (from highest to lowest priority): (1) 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; (2) BMPs that harvest and use (e.g., cisterns and rain barrels); and (3) Vegetated BMPs that promote evapotranspiration including bioretention, biofiltration and bio-treatment.

4. The Permittees shall reflect in the Water Quality Management Plan Guidance and Template and require each priority development project to infiltrate, harvest and use, evapotranspire, or bio-treat[82] the 85th percentile storm event ("design capture volume"), as specified in Section XI.D. 6 above. Any portion of the design capture volume that is not infiltrated, harvested, used, evapotranspired or bio-treated[83] onsite by LID BMPs shall be treated and discharged in accordance with the requirements set forth in Section XI.E.10 and/or Section XI.G, below.

5. Within 18 months of adoption of this Order, the Permittees shall review and update the Water Quality Management Plan Guidance and Template to incorporate LID principles (where feasible) and to address the impact of urbanization on downstream hydrology. At a minimum, the following elements shall be included during the update:

   a. Site Design BMPs:

[81] http://www.water.ca.gov/wateruseefficiency/landscapeordinance/

[82] 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 XI.E.7]. Specific design, operation and maintenance criteria for bio-treatment systems shall be part of the model WQMP that will be produced by the permittees.

[83] For all references to bio-treat/bio-treatment, see footnote 82.

i. Review and update the menu of site design BMPs to include any LID BMP that is currently not listed.

ii. Include as a reference for design and installation of LID BMPs the *LID Guidance Manual for Southern California* developed by the Southern California Coastal Water Research Project upon its completion.

iii. Techniques or specifications to minimize soil compaction in areas designated for site design BMPs, especially infiltration.

iv. Review and update design, installation and test specifications for retention BMPs to prevent unwanted ponding.

v. Evaluate the use of a credit system[84] for using site design BMPs.

vi. Develop in-lieu programs for projects where implementation may not be feasible.

b. Source Control BMPs:

i. Review and update the menu of source control BMPs.

ii. Include design and installation standards for each structural source control BMP.

c. Treatment Control BMPs:

i. Update the list of treatment control BMPs, including an evaluation of their effectiveness based on national, statewide or regional studies.

ii. Prioritize treatment control BMPs based on their effectiveness in pollutant removal and require project proponents to select the most appropriate BMPs.

iii. Include design and installation standards for each treatment control BMP.

d. Hydrologic Conditions of Concern (HCOC):

i. 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 re-development projects:

a) do not cause a hydrologic condition of concern (HCOC), or

b) otherwise, demonstrate that the project does not have the potential to cause significant adverse impacts on downstream natural channels and habitat integrity, alone or in conjunction with the impacts of other projects likely to be implemented in the same drainage area.

ii. A development/redevelopment project does not cause a HCOC if it causes no adverse downstream impacts on the physical structure, aquatic, and riparian habitat and any of the following conditions is met: and any of the following conditions is met:

[84] See sample credit calculation spreadsheet in Appendix 2 of the adopted statewide construction permit,. http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

a) The project disturbs less than one acre and is not part of a common plan of development.

b) The post-development site hydrology (including runoff volume, velocity, duration, time of concentration[85],) is not significantly different from pre-development hydrology for a 2- year return frequency storm. A difference of 5% or less is considered insignificant.

c) 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. This exemption is only applicable to conveyance channels that have received regulatory approvals prior to June 1, 2004, including CEQA review and approvals by US Army Corps of Engineers, Regional Board, and California Department of Fish and Game.

iii. Where flow reduction strategies are established as part of TMDL compliance plans, decreases in flow loading from pre-development conditions are allowed and encouraged where necessary to protect or restore designated beneficial uses.

iv. If a project causes a HCOC, and a Watershed Action Plan has not been approved, the WQMP shall specify one of the following:

a) Verify the project's potential to cause significant adverse impacts by conducting a further evaluation of the projects impact on stream geomorphology and/or aquatic habitat. This evaluation should include consideration of pre- and post-development hydrograph volumes, time of concentration and peak discharge velocities for a 2 year storm event, consideration of sediment budgets, and a sediment transport analysis. If this evaluation confirms the project's potential to cause significant adverse downstream impacts on downstream natural channels and habitat integrity, alone or in conjunction with impacts of other projects, then the project shall satisfy items b), c), d), e), or f), below. If the evaluation indicates minimal impact on stream channels and habitats, no further action is required.

b) Require additional onsite or offsite mitigation to reduce potential erosion or impacts to aquatic habitats by using LID BMPs, where feasible, or other control measures.

c) Require in-stream controls[86] to mitigate the impacts on downstream natural channels and habitat integrity. 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

[85] 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.

[86] 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.

result in sustained degradation of water quality of the receiving waters and shall require all necessary regulatory approvals[87].

d) Mitigate the HCOC through implementation of the approved Watershed Action Plan.

e) If site conditions do not permit items b), c), or d) above, the alternatives and in-lieu programs discussed in the LIP, may be considered.

6. The WQMP shall specify methods for determining time of concentration.

7. A feasibility analysis that includes technically-based feasibility criteria for project evaluation to determine the feasibility of implementing LID.

   i. The feasibility analysis shall include a groundwater protection assessment to determine if structural infiltration BMPs are appropriate for the site

8. Integrate Watershed Action Plan and TMDL Implementation Plans into project-specific WQMPs in affected watersheds.

9. Within 18 months of adoption of this Oder, a copy of the updated WQMP Guidance and Template shall be submitted for review and approval by the Executive Officer. The Permittees shall implement the updated WQMP Guidance and Template within 90 days of approval. If the Executive Officer has not approved the WQMP Guidance and Template within 18 months of adoption of this Order, either the Permittees shall require implementation of LID BMPs, or determine infeasibility of LID BMPs for each project through a project-specific analysis, each of which shall be submitted to the Executive Officer, at least 30 days prior to Permittee approval. Such feasibility 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. Once the updated WQMP Guidance and Template has been approved by the Executive Officer, the submittal of feasibility determinations to the Executive Officer is no longer required.

10. If site conditions do not permit infiltration, harvesting and 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 a), b), and c), below, and the credits and in-lieu programs discussed under Section G, below, may be considered and implemented:

    a. Implement LID principles to the MEP 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.

[87] In-stream control projects require a Streambed 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.

b. 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 use 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.

c. 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.

d. For alternatives a), b), and c) above, the pervious areas to which the runoff from the impervious areas are connected should have the capacity to infiltrate, harvest and use, evapotranspire and/or bio-treat at least the design capture volume from the entire tributary area.

F. Road Projects

1. Within 24 months of adoption of this Order, the Principal Permittee, in cooperation with the Co-Permittees, shall develop standard design and post-development BMP guidance to be incorporated into projects for public streets, roads, highways, and freeway improvements 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 HCOC criteria. The guidance and BMPs shall address any paved surface 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 maximum extent practicable 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 plan for all municipal road projects.

3. Pending approval of the standard design and post-development BMP Guidance, Permittees shall require site-specific WQMPs for streets, roads and highway projects consistent with Section XI.D.4 of this Order.

G. Alternatives and In-Lieu Programs

1. If a preferred BMP is not technically feasible, other BMPs should be implemented to mitigate the project impacts, or if the cost of BMP implementation greatly outweighs the pollution control benefits, the Permittees may grant a waiver of the BMPs. All waivers, along with waiver justification documentation, must be submitted to the Executive Officer at least 30 days prior to Permittee approval of the WQMP. Only those projects that have completed a feasibility analysis as specified in the WQMP Guidance and Template (see Section XI.E.7) and approved by the Executive Officer shall be considered for alternatives and in-lieu programs. 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 and the urban runoff fund 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 the following information with respect to the urban runoff fund:

   a. Total amount deposited into the fund 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 site design and/or 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, duration and time of concentration 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 U.S., 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 LID and hydromodification requirements specified above. The following types of projects may be considered for the credit system:

a. Redevelopment projects that reduce 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 within the same watershed (see E.5.d.iv above)
h. City Center area
i. Historic Districts and Historic Preservation areas
j. Live-work developments
k. In-fill projects

5. The water quality credit system should not result in a net impact on water quality.
6. A summary of waivers of LID, Hydromodification and Treatment Control BMPs, along with any water quality credit granted, in-lieu projects or urban runoff fund contribution required by each 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. A WQMP review checklist that incorporates the required elements of the WQMP and a clear process for consultation early in the planning process with the Permittee's appropriate departments and sections. This review process shall involve the Permittee's Planning and Engineering Departments during the preliminary and final WQMP review to adequately incorporate project-specific water quality measures and watershed protection principles in their CEQA analysis.
2. Tools or procedures to incorporate project conditions of approval, including proper funding and maintenance and operation of all structural BMPs. The parties responsible for the long-term maintenance and operation of the BMPs upon project close-out and a funding mechanism for operation and maintenance shall be identified prior to approval of the WQMP.
3. A procedure to ensure that appropriate easements and ownerships are recorded/included in appropriate documents that provides the Permittee the authority for post-construction BMP operation and maintenance (also see J.1, below).
4. A final project close-out procedure and checklist to ensure that post-construction BMPs (site design, structural source control and treatment control BMPs) have been

built as per the approved WQMPs or other conditions of approval and are fully functional prior to issuance of certificates of occupancy (also see I.1 and I.2, below).

5. A procedure to work cooperatively with the local vector control district to address any vector problems associated with the water quality control systems. If not properly designed and maintained, some of the BMPs implemented to treat urban runoff could create a habitat for vectors (e.g., mosquitoes and rodents) and become a nuisance. The WQMP review, approval, and closure processes shall include consultation and collaboration with the local vector control districts on BMP design, installation, and operation and maintenance to prevent or minimize vector issues. If vector or nuisance problems are identified during inspections, the local vector control district should be notified.
6. Staff involved with WQMP review and approval shall be trained in accordance with Section XVI, Training Requirements.

I. Field Verification of BMPs

1. The Permittees' project close-out procedures shall include field verification that site design, source control and treatment control BMPs are designed, constructed and functional in accordance with the approved WQMP. Documentation of the field verification, including the WDID number, if applicable, information on the type, location and maintenance responsibility of the BMPs shall be sent to the Regional Board office by regular mail or electronic mail.
2. In addition, post-construction BMPs shall be inspected, prior to the rainy season, within three years after project completion and every three years thereafter. The Permittees shall verify, through visual observation, that the BMPs are properly maintained, operating, and are functional. Results of the inspections shall be reported in the Annual Report.

J. Change of Ownership and Recordation

1. The Permittees shall establish a mechanism to track changes in ownership and responsibility for the operation and maintenance of post-construction BMPs to ensure that they are properly recorded in public records at the County and/or City and the information is conveyed to all appropriate parties when there is a change in project or site ownership.
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.

K. Operation and Maintenance of Post-Construction BMPs

1. The Permittees shall ensure, to the MEP, that all post-construction BMPs continue to operate as 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. WQMPs shall identify the responsible party for maintenance, including vector minimization and control measures, and funding

source(s) for operation and maintenance of all site design and structural treatment control systems. Permittees shall, through conditions of approval and during inspections, ensure proper maintenance and operation of all permanent structural post-construction BMPs installed in new developments. Design of these structures shall allow adequate access for maintenance.

2. Within twelve months of adoption of this Order, the Permittees shall develop a database to track operation and maintenance of post-construction BMPs. The database should include available BMP information such as the type of BMP design, location of BMPs (latitude and longitude), date of construction, party responsible for maintenance, maintenance frequency, source of funding for operation and maintenance, maintenance verification, and any problems identified during inspection including any vector or nuisance problems. A copy of this database shall be submitted with the annual report.

L. Pre-Approved Projects

1. The above provisions shall be implemented in a manner consistent with the maximum extent practicable standard for all priority projects 90 days from the date of approval of the updated Water Quality Management Plan Guidance and Template as per Section XI.E.5.
2. The above provisions for LID and hydrologic conditions of concern are not applicable to projects that have an approved WQMP prior to the date of adoption of the revised WQMP Guideline and Template (Section XI.D.2). The Regional Board recognizes that full implementation may not be feasible for certain projects which have received tentative tract or parcel map or other approvals prior to the approval of the updated WQMP.

XII. PUBLIC EDUCATION AND OUTREACH

A. The Permittees shall continue to implement the public education efforts already underway as described in the 2006 ROWD/MSWMP and shall implement the most effective elements of the comprehensive public and business education strategy upon completion of the risk-prioritization strategy to this program element. Each year 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 most critical behaviors that cause storm water pollution problems. Any changes to the on-going public education program must be described in the annual report.

B. Consistent with the MEP standard, each Permittee shall implement applicable elements of the public education and outreach program measurably increase public knowledge regarding the storm drain system and the impacts of urban runoff on receiving water quality.

C. When feasible and effective, 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.

D. The Permittees shall facilitate implementation of BMPs listed in the Storm Water Management Plan and/or the Water Quality Management Plan for restaurants, automotive service centers, gasoline stations and other similar facilities by distributing BMP brochures or other fact sheets to these facilities during inspections and/or through other means.

E. Within 12 months from the date of adoption of this Order, the Permittees shall 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.

F. The Permittees shall ensure that appropriate educational materials, including the BMP brochures, are provided to all new industrial and commercial enterprises in their jurisdiction at the time building and construction permits (or occupancy permits) are issued and/or at the time business licenses are issued.

G. The Permittees shall continue to maintain a hotline telephone number and website to allow the public to report illegal dumping from residential, industrial, construction or commercial sites into public streets, storm drains and other waterbodies. The hotline number and website address for reporting storm water pollution problems shall be promoted in an appropriate outreach effort. 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.

XIII. PERMITTEE FACILITIES AND ACTIVITIES

A. Each Permittee shall inventory its fixed facilities, field operations, and drainage facilities, and shall conduct inspections of these facilities on an annual basis to ensure that these facilities and activities do not contribute pollutants to receiving waters, consistent with the MEP standard. At a minimum, the following municipal facilities, that are owned and/or operated by the Permittees, shall be inspected. Records of these facilities and inspection findings shall be maintained in a database:

1. Public streets, roads (including rural roads) and highways within its jurisdiction;

2. Parking facilities;
3. Fire fighting training facilities;
4. Flood management projects and flood control structures;
5. Areas or facilities and activities discharging directly to environmentally sensitive areas such as 303(d) listed waterbodies or those with a RARE beneficial use designation;
6. Publicly owned treatment works (including water and wastewater treatment plants)
   a. Sanitary sewage collection systems shall be adequately maintained to minimize overflows, leaks, or other failures (also see requirements in Section IX, above), but need not be inspected annually unless deemed to be necessary;
7. Solid waste transfer facilities;
8. Land application[88] sites;
9. Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles; and
10. Household hazardous waste collection facilities.
11. Municipal airfields.
12. Parks and recreation facilities.
13. Special event venues following special events (festivals, sporting events).
14. Power washing.
15. Other municipal areas and activities that the Permittee determines to be a potential source of pollutants.

B. The Permittees may develop a risk-based scoring system to prioritize Permittee facilities and activities to determine the frequency and scope of inspections, as an alternative to XIII.A, above. If proposed, the scoring system shall consider factors including, but not limited to: the hazardous nature of materials used on site; potential for erosion and pollutant discharges, particularly such materials as pre-production plastic (nurdles) or pollutants for which the receiving water is impaired; site size and location including proximity to receiving water, history of spills and leaks; use of pollution control and prevention measures; and compliance history. The risk-based scoring system shall include a criterion to identify the facilities as high, medium or low risk and shall be submitted to the Executive Officer for approval. The electronic database submitted with the annual report (see X.A.2, above) shall include the risk-based scores for each facility. The facility and/or activity scores must be reviewed and updated annually, if necessary.

C. At least 80% of the inlets, open channels, and basins shall be inspected at least once during each reporting year and cleaned, if necessary, with 100% of the facilities inspected in a two-year period, using the BMP fact sheet developed by the Management Committee. This information shall be included in the annual report.

D. Each Permittee shall clean its drainage facilities where the inspection reveals that the sediment/storage volume is 25% full or greater, or where there is evidence of illegal discharge, or if accumulated sediment or debris impairs the hydraulic capacity of the facility.

[88] Examples are compost application, animal/dairy manure application, and biosolids application

E. The Permittees' shall evaluate, annually, the inspection and cleanout frequency of drainage facilities, including catch basins, referred to in Section B and C, above. This evaluation shall consider the data generated by historic and ongoing inspections and cleanout of these facilities, and the IC/ID program (Section VIII). The evaluation shall be based on a prioritized list of drainage facilities considering factors such 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 their inspection and 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.

F. 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 SSO Order. Each Permittee shall cooperate and coordinate with the appropriate sewage collection agency to swiftly respond to and contain any sewage spills. This control measure and coordination with the sewering agency shall be documented in the LIP.

G. The Permittees shall continue to train its employees in integrated pest management, and pesticide and fertilizer applications.

H. Successful implementation of the provisions in this Order will require the cooperation of many different departments within each Permittee's jurisdiction (e.g., Fire Department, Department of Environmental Health, Planning Department, Transportation Department, Parks and Recreation, Building and Safety, Code Enforcement, etc.) As such, these Permittee departments, programs, or organizations are expected to actively participate in implementing this Order. Other public agency organizations having programs/activities that have an impact on storm water quality are listed in Attachment 3. The Permittees shall ensure that all necessary Permittee departments within their jurisdiction implement their respective requirements as specified in the LIP.

I. Each Permittee shall annually evaluate the information provided to field staff during their maintenance activities to direct public outreach efforts and determine the need for revision of existing maintenance procedures or schedules. The results of this evaluation shall be provided in the annual report.

J. Each Permittee shall include its procedures, schedules, and tools necessary to implement the requirements of this section in its LIP. The LIP shall state the positions responsible for performing and reporting completion of each task and the training requirements for that position.

XIV. MUNICIPAL CONSTRUCTION PROJECTS

A. 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 the ROWD and MSWMP.

B. Municipal construction projects shall be in compliance with the latest version of the State's General Permit for Stormwater Discharges Associated with Construction Activities except that an NOI need not be filed with the State Board.

C. Prior to commencement of construction activities, the Permittees shall notify the Executive Officer of the Regional Board of the proposed construction project by submitting a Notice of Intent (NOI), or Permit Registration Documents (PRDs) (web-based) as provided in Attachment 7, and a location map depicting the project location. The filing and annual fees for these NOIs/PRDs are waived for the Permittees.

D. Upon completion of the construction project, the Permittee shall notify the Executive Officer or its designee by submitting: (1) a Notice of Termination (NOT), provided in Attachment 8; (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 report. A database of post-construction BMPs for which the Permittees are responsible for shall be developed and referenced in the LIP.

E. The Permittees shall develop and implement a WQMP, if applicable, a storm water pollution prevention plan (SWPPP), a monitoring program that is specific for the construction project prior to the commencement of any of the construction activities, and any other reports or plans required under the General Construction Activity Storm Water Permit. The SWPPP and the WQMP shall be kept at the construction site and released to the public and/or Regional Board staff upon request.

F. 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.

G. Emergency Permittee public works 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.

H. All other terms and conditions of the latest version of the State's General Construction Activity Storm Water Permit shall be applicable.

XV. PERMITTEES DE-MINIMUS 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 de-minimus types of discharges at least 15 days prior to start of the discharge, by submitting a NOI and supporting documents, as provided in Attachment 9.

C. For existing de-minimus dischargers (authorized to discharge under Order No. R8-2009-0003 prior to the adoption date of this Order), discharges will continue to be regulated under the terms and conditions of Order No. R8-2009-0003 until a new discharge authorization is issued, provided that the discharger submits, no later than 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 R8-2009-0003 is no longer needed; or

   ii. Apply for new discharge authorization as a new de-minimus discharger, under this Order.

XVI. TRAINING PROGRAM FOR STORM WATER MANAGERS, PLANNERS, INSPECTORS AND MUNICIPAL CONTRACTORS

A. Within 24 months from the date of adoption of this Order, the Principal Permittee, in coordination with the Co-Permittees, will update their existing training program to incorporate new or revised program elements related to the development of the LID program, revised WQMP, and establishment of LIPs for each Permittee. The updated training program includes a training schedule, curriculum content, and defined expertise and competencies for storm water managers, inspectors, maintenance staff, 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 working on Permittee projects.

   1. Within 36 months, the Permittees will update training program elements to incorporate new or enhanced stormwater program elements due for completion within 36 months of permit adoption.

   2. By 48 months, the Permittees will have a completely revised training program that includes any enhanced or new program elements not previously addressed, including the WAP.

B. 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 and sediment control BMPs and pollution prevention measures; the proper use and maintenance of erosion and sediment controls; the enforcement protocols and methods established in the MSWMP, LIP, WQMP, including LID Principles and Hydrologic Conditions of Concern, the CASQA Construction Stormwater Guidance Manual, Enforcement Response Guide and Illicit Discharge/Illegal Connection Training Program. The training program should address vector control issues related to storm water pollution control BMPs

C. The training modules for each category of trainees (managers, inspectors, planners, engineers, contractors, public works crew, etc.) should define the required competencies,

outline the curriculum, and include a testing procedure at the end of the training program and proof of completion of training (Certificate of Completion).

D. At least on an annual basis, the Principal Permittee shall provide and document training to applicable public agency staff on the updated Municipal Activities and Pollution Prevention Strategy (MAPPS), and any other applicable guidance and procedures developed by the Permittees to address Permittee activities in fixed facilities as well as field operations, including conveyance system maintenance. Each Permittee shall document training for its staff related to jurisdiction-specific responsibility, procedures and implementation protocols established in its LIP. The field program training should include Model Integrated Pest Management, pesticide and fertilizer guidelines. Appropriate staff from each municipality shall attend at least three of these training sessions during the term of this Order. 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. In instances where applicable municipal operations are performed by contract staff, each Permittee shall require evidence that contract staff have received a level of training equivalent to that listed above.

E. The Principal Permittee shall provide and document training for public employees and interested consultants that incorporates at a minimum, the requirements in this Order related to new development and significant re-development and 401 certifications, and model environmental review (CEQA review) for preparation of environmental documents.

F. The Principal Permittee shall provide 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.

G. The Principal Permittee shall either notify designated Regional Board staff regarding training events via e-mail or submit course content in advance of training sessions.

H. Each Permittee shall adequately train any of its staff involved with storm water related projects and the implementation of this Order within six months from being assigned these duties and on an annual basis thereafter, prior to the rainy season.

I. The LIP shall specify the training requirements for Permittee staff and contractor involved in implementing the requirements of this Order. Each Permittee shall maintain a written record of all training provided to its storm water and related program staff.

XVII. NOTIFICATION REQUIREMENTS

A. Within 24 hours of discovery, the Permittees shall provide oral or email notification to the Executive Officer of noncompliant sites within its jurisdiction that are determined to pose a threat to human health or the environment (e.g., an oil spill that could impact wild life, a hazardous substance spill where residents are evacuated, reportable quantities of hazardous substance spills defined in 40 CFR 117 & 302, etc.). Following oral notification, a written report must be submitted to the Executive Officer within 10 days, detailing the nature of the non-compliance, any corrective action taken by the site/facility owner, other relevant information (e.g., past history of non-compliance, environmental damage resulting from the non-compliance, site/facility owner responsiveness) and the

type of enforcement action that will be carried out by the 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 appropriate database.

B. Sewage spill notification shall be consistent with the timelines specified in the SSO Order.

C. 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 issues shall be scheduled for a public hearing at a Regional Board meeting after proper public notice.

D. As specified in Section X.A.7, the Permittees shall deem facilities operating without a proper permit to be in significant non-compliance. These facilities shall be reported within 14 calendar days to the Regional Board by electronic mail or other written means. Permittees' notifications of facilities' failure to obtain required permits under the Construction Activities Storm Water General Permit (Construction Permit), Industrial Activities Storm Water General Permit (Industrial Permit), including Requirements to file a Notice of Intent or No Exposure Certification, Notice of Non-applicability, and/or 401 Certification must include, at a minimum, the following documentation:

1. Name of the facility;
2. Operator of the facility;
3. Owner of the facility;
4. Construction/Commercial/industrial activity being conducted at the facility that is subject to the Construction//Industrial General Permit, or 401 Certification; and
5. Records of communication with the facility operator regarding the violation, including an inspection report.

XVIII. PROGRAM MANAGEMENT ASSESSMENT / MSWMP REVIEW

A. Upon the effective date of this Order, the Permittees shall start implementing the 2007 MSWMP and modify it to be consistent with the requirements of this Order and the schedules contained herein. If major modifications to the 2007 MSWMP not addressed in this Order are determined to be necessary, the Permittees shall prepare and submit MSWMP modifications to the Executive Officer for review and approval. Such modifications may include regional and watershed-specific requirements and/or waste load allocations developed and approved pursuant to the TMDL process.

B. By October 1 of each year, the Permittees shall evaluate the MSWMP to determine the need for any revisions 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:

1. Review of the formal training needs of municipal employees;

2. Review of coordination meeting/training for the designated NPDES inspectors.; and

3. Propose any changes to assess program effectiveness on an area-wide and jurisdictional basis. Permittees may utilize the CASQA Guidance[89] 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.

C. The annual report shall include the findings of this review and a schedule to address necessary revisions, or a copy of the amended MSWMP with the proposed changes. Replacement pages are acceptable if modifications are not extensive. Annual reports shall also be submitted in electronic format.

D. The Management Committee will continue to meet at least 8 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 not less than 7 of 8 scheduled meetings.

XIX. 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 expenditures for the previous fiscal year,
2. Each Permittee's budget for the current fiscal year,
3. A description of the source of funds, and
4. Each Permittee's estimated budget for the next fiscal year.

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 specifically with Section III. Discharge Limitations, and Section IV. Receiving Water Limitations, through timely implementation of their MSWMP and any modifications, revisions, or amendments developed pursuant to this Order approved by the Executive Officer or determined by the Permittees to be necessary to meet the requirements of this Order. The MSWMP, including any approved amendments thereto is hereby made an enforceable component of this Order.

[89] CASQA, May 2007. Municipal Stormwater Program Effectiveness Assessment Guidance. January 29, 2010 (Final)

C. The Permittees shall, at a minimum, implement all elements of the MSWMP and its components. Where the dates are different from the corresponding dates in this Order, the dates in this Order shall prevail. Any proposed revisions to the MSWMP shall be submitted with the Annual Report to the Executive Officer of the Regional Board for review and approval. All approved revisions to the MSWMP 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 MSWMP and its components, 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.

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 districts and the State Department of Health Services during the development and implementation of urban runoff management programs are necessary to minimize potential vector habitat and public health impacts resulting from vector breeding. Nothing in this permit 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. The Permittees shall comply with Monitoring and Reporting Program No. R8-2010-0036 and any revisions thereto, which are 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. R8-2010-0036.

F. Upon approval by the Executive Officer or 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.

G. The Permittees shall report to the Executive Officer of the Regional Board:

1. 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, 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 U.S.

H. The 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.

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 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 any requirements imposed upon the Permittees through the TMDL process.

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.

XXII. PERMIT EXPIRATION AND RENEWAL

A. This Order expires on January 29, 2015 and the Permittees must file a Report of Waste Discharge (permit renewal 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:

1. A program effectiveness analysis, including the effectiveness of the overall urban and storm water runoff management program in achieving water quality standards in receiving waters.
2. Any proposed revisions to the urban and storm water runoff management program based on the findings of the program effectiveness analysis (this could be included in a revised MSWMP). Revisions to the program elements should be consistent with the risk-based approach proposed in the 2006 Report of Waste Discharge.
3. Changes in land use and/or population including map updates.
4. 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.
5. Any new or revised program elements and compliance schedule(s) necessary to comply with Section VI of this Order.

B. 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).

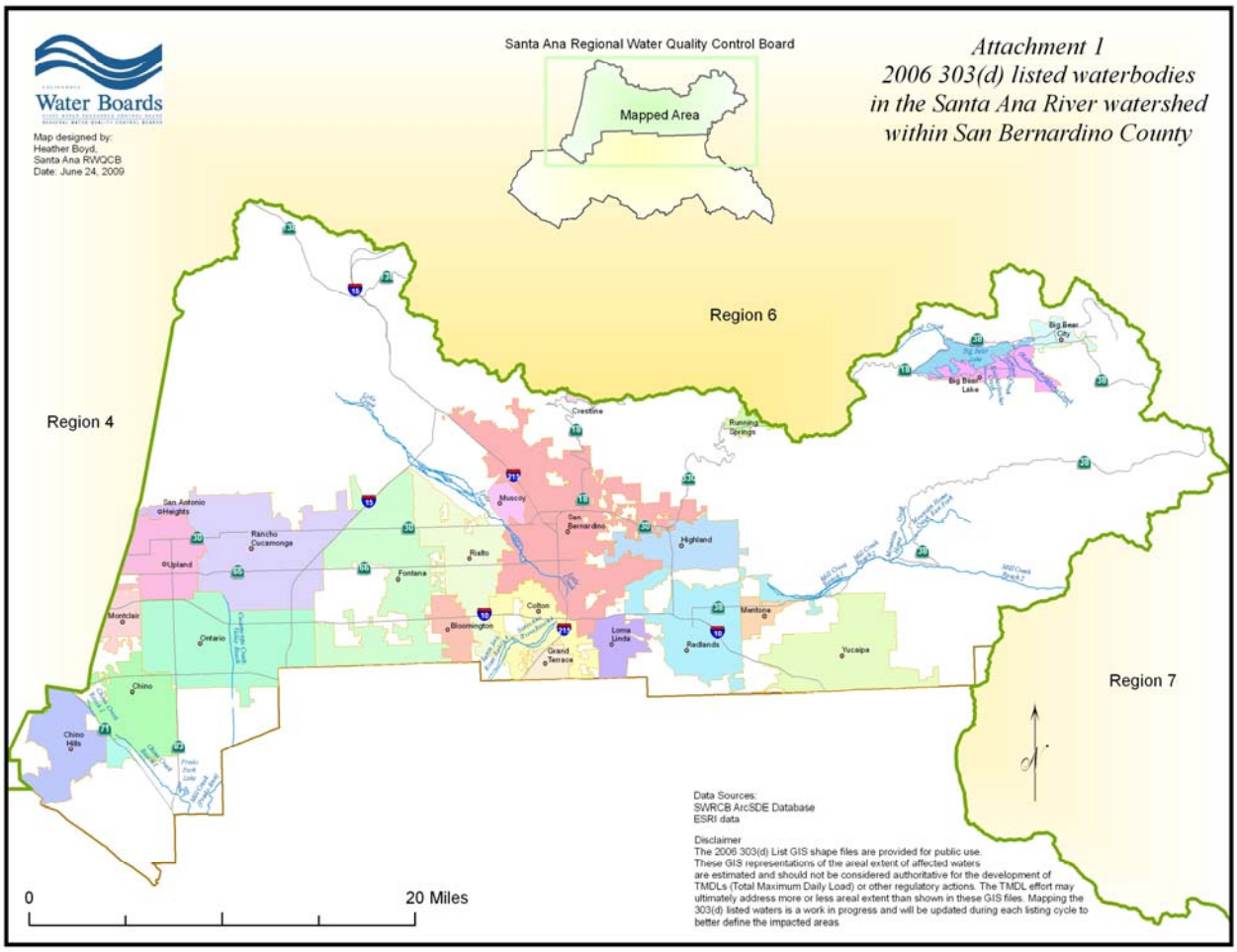
C. This Order shall serve as an NPDES Permit pursuant to Section 402 (p) of the Clean Water Act, or amendments thereto, and shall become effective ten days after the date of its adoption provided the Regional Administrator of the USEPA has no objections. If the

Regional Administrator objects to its issuance, the Permit shall not become effective until such objection is withdrawn.

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 29, 2010.

Gerard J. Thibeault
Executive Officer

Attachment 1: San Bernardino County Project Area



Attachment 2: Inland Surface Streams

A. Santa Ana River

Santa Ana River, Reaches 4, 5, and 6

B. San Bernardino Mountain Streams

Mill Creek Drainage

- Mill Creek, Reaches 1 and 2
- Mountain Home Creek
- Mountain Home Creek, East Fork
- Monkey Face Creek
- Alger Creek
- Falls Creek
- Vivian Creek
- High Creek
- Other Tributaries: Lost, Oak Cove, Green, Skinner, Momyer and Glen Martin Creeks, and other Tributaries to these Creeks

Bear Creek Drainage

- Bear Creek
- Siberia Creek
- Slide Creek
- All Other Tributaries to these Creeks

Big Bear Lake Tributaries

- North Creek
- Metcalf Creek
- Grout Creek
- Rathbone (Rathbun) Creek
- Summit Creek
- Other Tributaries to Big Bear Lake: Johnson, Minnelusa, Polique, and Red Ant Creeks, and other Tributaries to these Creeks

Baldwin Lake Drainage

- Shay Creek
- Other Tributaries to Baldwin Lake: Sawmill, Green, and Caribou Canyons and other Tributaries to these Creeks.

C. Other Streams Draining to Santa Ana River (Mountain Reaches)

- Cajon Creek
- City Creek
- Devil Canyon Creek
- East Twin and Strawberry Creeks
- Waterman Canyon Creek
- Fish Creek
- Forsee Creek
- Plunge Creek
- Barton Creek

Bailey Canyon Creek
Kimbark Canyon, East Fork Kimbark Canyon, Ames Canyon and West Fork Cable Canyon Creeks
Valley Reaches of Above Streams
Other Tributaries (Mountain Reach): Alder, Badger Canyon, Bledsoe Gulch, Borea Canyon, Breakneck, Cable Canyon, Cienega Seca, Cold, Converse, Coon, Crystal, Deer, Elder, Fredalba, Frog, Government, Hamilton, Heart Bar, Hemlock, Keller, Kilpecker, Little Mill, Little Sand Canyon, Lost, Meyer Canyon, Mile, Monroe Canyon, Oak, Rattlesnake, Round Cienega, Sand, Schneider, Staircase, Warm Springs Canyon and Wild Horse Creeks, and other tributary to these Creeks

D. San Gabriel Mountain Streams (Mountain Reaches)

San Antonio Creek
Lytle Creek (South, Middle, and North Forks) and Coldwater Canyon Creek
Day and East Etiwanda Creeks
Valley Reaches of Above Streams
Cucamonga Creek (Mountain Reach)
Cucamonga Creek (Valley Reach)
Other Tributaries (Mountain Reaches): San Sevaine, Deer, Duncan Canyon, Henderson Canyon, Stoddard Canyon, Icehouse Canyon, Cascade Canyon, Cedar, Falling Rock, Kerkhoff and Cherry Creeks, and other tributaries to these Creeks.

E. San Timoteo Area Streams

San Timoteo Creek, Reaches 1 and 2
Oak Glen, Potato Canyon and Birch Creeks
Yucaipa Creek

F. Prado Area Streams

Chino Creek

G. Lakes and Reservoirs

Baldwin Lake
Big Bear Lake
Jenks Lake
Prado Park Lakes

Attachment 3: List of Other Entities with the Potential to Discharge Pollutants to the San Bernardino County Storm Water Conveyance System

A. Government Agencies

U.S. Army Corps of Engineers
U.S. Department of Agriculture - Forest Services, San Bernardino County National Forest
California Department of Transportation (Cal Trans)
California Department of Parks and Recreation - Chino Hills State Park
Inland Valley Development Agency, San Bernardino International Trade Center and Airport

B. Hospitals

Bear Valley Community Hospital
Chino Community Hospital
Doctors Hospital
Kaiser Foundation Hospital
Loma Linda Community Hospital
Loma Linda University Medical Center
Mountains Community Hospital
Ontario Community Hospital
Patton State Hospital
U.S. Department of Veterans Affair - Jerry L. Pettis Memorial Veterans Medical Center
Redlands Community Hospital
St. Bernardino Medical Center
San Antonio Community Hospital
San Bernardino Community Hospital
San Bernardino County Hospital

C. Railroads

AT&SF Railway Company
Union Pacific Railroad Company
BNSF Railway Company

D. School Districts

Alta Loma Elementary School District
Bear Valley Unified School District
Central Elementary School District
Chaffey Joint Union High School District
Chino Valley Unified School District
Colton Joint Unified School District
Cucamonga Elementary School District
Etiwanda Elementary School District
Fontana Unified School District
Mountain View Elementary School District

Mt. Baldy joint Elementary School District
Ontario-Montclair Elementary School District
Rialto Unified School District
Rim of the World Unified School District
Redlands Unified School District
San Bernardino City Unified School District
Upland Unified School District
Yucaipa Joint Unified School District

E. Universities and Colleges

California State University - California State University San Bernardino
San Bernardino Community College District - Chaffey College Campus
San Bernardino Community College District - Crafton Hills College Campus
San Bernardino Community College District - San Bernardino Valley College Campus
University of Redlands
Loma Linda University

F. Water Districts

Big Bear Municipal Water District
Bear Valley Water District
Inland Empire Utilities Agency
Cucamonga Valley Water District
East Valley Water District
Monte Vista Water District
San Bernardino Valley Municipal Water District
San Bernardino Valley Water Conservation District
West San Bernardino County Water District
Yucaipa Valley Water District

G. Transportation

Omnitrans
Metrolink (Fontana, Montclair, Ontario, Rancho Cucamonga, Rialto, San Bernardino)
Ontario International Airport (LA/ONT)
Redlands Municipal Airport
Rialto Municipal Airport
Chino Airport
Cable Airport

H. Other Potential Dischargers

United States Postal Service
California National Guard
Southern California Edison

Attachment 4: Glossary

Basin Plan – Water Quality Control Plan developed by the Regional Board for the Santa Ana River Watershed.

Beneficial Uses – The uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. "Beneficial Uses" that may be protected against 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. Existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law. [California Water Code Section 13050(f)]. Beneficial Uses for the Receiving Waters are identified in the Basin Plan.

Best Available Technology (BAT) – BAT is the acronym for best available technology economically achievable. BAT is the technology-based standard established by congress in CWA section 402(p)(3)(A) for industrial dischargers of storm water. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of treatment and best management practices, or BMPs. For example, secondary treatment (or the removal of 85% suspended solids and BOD) is the BAT for suspended solid and BOD removal from a sewage treatment plant. BAT generally emphasizes treatment methods first and pollution prevention and source control BMPs secondarily.

The best economically achievable technology that will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants is determined in accordance with regulations issued by the Environmental Protection Agency Administrator. Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the permitting authority deems appropriate.

Best Conventional Technology (BCT) – BCT is an acronym for Best Conventional Technology. BCT is the treatment techniques, processes and procedure innovations, and operating methods that eliminate or reduce chemical, physical, and biological pollutant constituents.

Best Management Practices – Best Management Practices (BMPs) are defined in 40 CFR 122.2 as 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. In the case of municipal storm water permits, BMPs are typically used in place of numeric effluent limits.

Bioaccumulate – The progressive accumulation of contaminants in the tissues of organisms through any route including respiration, ingestion, or direct contact with contaminated water, sediment, pore water, or dredged material to a higher concentration than in the surrounding environment. Bioaccumulation occurs with exposure and is independent of the tropic level.

Bioassessment - The use of biological community information to evaluate the biological integrity of a water body and its watershed. With respect to aquatic ecosystems, bioassessment is the collection and analysis of samples of the benthic macroinvertebrate community together with physical/habitat quality measurements associated with the sampling site and the watershed to evaluate the biological condition (i.e. biological integrity) of a water body.

Biological Integrity – Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5:55-68 as: "A balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region." Also referred to as ecosystem health.

CalTrans - California Department of Transportation

CEQA – California Environmental Quality Act (Section 21000 et seq. of the California Public Resources Code).

Clean Water Act Section 402(p) – [33 USC 1342(p)] is the federal statute requiring municipal and industrial dischargers to obtain NPDES permits for their discharges of storm water.

Clean Water Act Section 303(d) Listed Water Body – is an impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology-based pollution controls required by the CWA. The discharge of urban runoff to these water bodies by the Co-permittees is significant because these discharges can cause or contribute to violations of applicable water quality standards.

Construction Site – Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation

Contamination – As defined in the Porter-Cologne Water Quality Control Act, contamination is "an impairment of the quality of 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 U.S. are affected.

Criteria - The numeric values and the narrative standards that represent contaminant concentrations that are not to be exceeded in the receiving environmental media (surface water, ground water, sediment) to protect beneficial uses.

CWA – Federal Clean Water Act

CWC – California Water Code

Debris – Debris is defined as the remains of anything destroyed or broken, or accumulated loose fragments of rock.

Development Projects - New development or redevelopment with land disturbing activities; structural development, including construction or installation of a building or structure, the creation of impervious surfaces, public agency projects, and land subdivision.

Dry Season – June 1 through September 30 of each year, unless specified otherwise in an approved TMDL Implementation Plan.

Effluent Limitations – Means any restriction on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into Waters of the United States, waters of the "contiguous zone," or the ocean. (40 CFR §122.2)

Environmentally Sensitive Areas (ESAs) - Areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Resources Control Board (Water Quality Control Plan for the Santa Ana River Basin (1994) and amendments); water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the Santa Ana River Basin (1994) and amendments); areas designated as preserves or their equivalent under the Natural Communities Conservation Program (Multiple Species Habitat Conservation Plan, MSHCP) within the Cities and County of San Bernardino; and any other equivalent environmentally sensitive areas which have been identified by the Co-Permittees.

Erosion – The process whereby material (such as sediment) is detached and entrained in water or air and can be transported to a different location. Chemical erosion involves materials that are dissolved and removed and transported.

GIS - Geographical Information Systems

Grading – The cutting and/or filling of the land surface to a desired slope or elevation.

Green Infrastructure - Generally refers to technologically feasible and cost-effective systems and practices that use or mimic natural processes to infiltrate, evapotranspirate, or use stormwater or runoff on the site where it is generated. Green infrastructure is used interchangeably with low impact development (LID). See LID.

Hazardous Material – 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 the U.S. EPA to be reported if a designated quantity of the material is spilled into the waters of the United States or emitted into the environment.

HCOC – Hydrologic Condition of Concern – Condition when a proposed hydrologic change is deemed to have the potential to cause significant impacts on downstream channels and aquatic habitats, alone or in conjunction with impacts of other projects.

Hydromodification – the "alteration of the hydrologic characteristics of coastal and non-coastal waters, which in turn could cause degradation of water resources"[90](USEPA, 2007).

[90] United States Environmental Protection Agency. 2007. National Management Measures to Control Nonpoint Source Pollution from Hydromodification. EPA-841-B-07-002.

The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that may result in increased stream flows and sediment transport.

IC/ID – Illicit Connection/Illegal Discharge

Illicit Connection – Illicit Connection means any connection to the MS4 that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations.

Illicit Discharge – Any discharge to a municipal separate storm sewer 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 V, Effluent Limitations and Discharge Specifications, of this Order, and discharges authorized by the Regional Board.

Impaired Waterbody – Section 303(b) of the CWA requires each of California's Regional Water Quality Control Boards 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.

Isopluvial - A line on a map drawn through geographical points having the same pluvial (rain, precipitation) index.

Land Disturbance – The clearing, grading, excavation, stockpiling, or other construction activity that results in the possible mobilization of soils or other Pollutants into the MS4. This specifically does not include routine maintenance activity to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. This also does not include emergency construction activities required to protect public health and safety. The Permittees should first confirm with Regional Board staff if they believe that a particular routine maintenance activity is exempt under this definition from the General Construction Activity Storm Water Permit or other Orders issued by the Regional Board.

Load Allocations (LA) – Distribution or assignment of TMDL Pollutant loads to entities or sources for existing and future nonpoint sources, including background loads.

Local Implementation Plan - Document describing an individual Permittee's implementation procedures for compliance with the MS4 Permit, including ordinances, databases, plans, and reporting materials.

Low Impact Development (LID) – A storm water management and land development strategy that combines a hydrologically functional site design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. LID techniques mimic the site predevelopment site hydrology by using site design techniques that store, infiltrate, evapotranspire, bio-filter or detain runoff close to its source

MEP (Maximum Extent Practicable) - 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 pollutant removal effectiveness, regulatory compliance, gravity of the problem, public acceptance, social benefits, cost and technological feasibility.

MEP is the technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) that operators of MS4s must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source control and treatment control BMPs. MEP generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than BAT. A definition for MEP is not provided either in the statute or in the regulations. Instead, the 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 urban runoff management programs. Their total collective and individual activities conducted pursuant to the urban runoff management programs 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 MS4 maintenance). In the absence of a proposal acceptable to the Regional Board, the Regional Board defines MEP.

Municipal Storm Water Conveyance System – (See Municipal Separate Storm Sewer System or MS4).

Municipal Separate Storm Sewer System (MS4) – MS4 is an acronym for Municipal Separate Storm Sewer System. A Municipal Separate Storm Sewer System is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, natural drainage features or channels, modified natural channels, 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; (ii) Designated or used for collecting of conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollution Discharge Elimination System (NPDES) – A national program under Section 402 of the Clean Water Act for regulation of discharges of pollutants from point sources to waters of the United States. Discharges are illegal unless authorized by an NPDES permit.

NOI [Notice of Intent] – A NOI is an application for coverage under the General Stormwater Permits.

Non-Point Source Pollution (NPS) – Non point source refers to diffuse, widespread sources of pollution. These sources may be large or small, but are generally numerous throughout a watershed. Non Point Sources include but are not limited to urban, agricultural, or industrial areas, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining, livestock grazing, as well as physical changes to stream channels, and habitat degradation. NPS pollution can occur year round any time rainfall, snowmelt, irrigation, or any other source of water runs over land or through the ground, picks up pollutants from these numerous, diffuse sources and deposits them into rivers, lakes, and coastal waters or introduces them into ground water.

Non-Storm Water – Non-storm water consists of all discharges to and from a storm water conveyance system that do not originate from precipitation events (i.e., all discharges from a

conveyance system other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges.

NOT - Notice of Termination – Formal notice to the Regional Board of intent to terminate water discharge for projects covered under a General Stormwater Permit.

Nuisance – As defined in the Porter-Cologne Water Quality Control Act a nuisance is "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."

Numeric Effluent Limitations – A quantitative limitation on pollutant concentrations or levels to protect beneficial uses and water quality objectives of a water body.

Nurdles – A plastic pellet (typically less than 5 mm diameter) also known as pre-production plastic pellet or plastic resin pellet.

Open Space - Any parcel or area of land or water that is essentially unimproved or devoted to an open-space use for the purposes of (1) the preservation of natural resources, (2) the managed production of resources, (3) outdoor recreation, or (4) public health and safety. [Riverside County General Plan, adopted October 7, 2003. Technical Appendix A , Glossary]

Order – Order No. R8-2010-0036 (NPDES No. CAS618036)

Outfall - Means a Point Source as defined by 40 CFR 122.2 a, 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. [40 CFR 122.26 (b)(9)]

PAH (Polycyclic aromatic hydrocarbon) – are hydrocarbons that consist of fused aromatic rings. PAHs occur in oil, coal, and tar deposits, and are produced as byproducts of fuel burning (whether fossil fuel or biomass). PAHs are persistent, bioaccumulative, and toxic (PBT) pollutants. Though exposure usually occurs by breathing contaminated air, other sources include industrial processes, transportation, energy production and use, and disposal activities.

PCBs - Polychlorinated biphenyls. Due to PCB's toxicity and classification as persistent organic pollutants, PCB production was banned by the United States Congress in 1976 and by the Stockholm Convention on Persistent Organic Pollutants in 2001.

Party – Defined as an individual, association, partnership, corporation, municipality, state or federal agency, or an agent or employee thereof. [40 CFR 122.2]

Permittees – Co-permittees and the Principal Permittee

Person – A person is defined as an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof. [40 CFR122.2].

Point Source – 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 operations, landfill leachate collection systems, 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.

Pollutant – Any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated. It includes any type of industrial, municipal, and agricultural waste discharged into water. The term "pollutant" is defined in section 502(6) of the Clean Water Act as follows: "The term 'pollutant' means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." It has also been interpreted to include water characteristics such as toxicity or acidity.

Pollutants of Concern – A list of potential pollutants to be analyzed for in the Monitoring and Reporting Program. This list shall include: TSS, total inorganic nitrogen, total phosphorus, soluble reactive phosphorus, acute toxicity, fecal coliform, total coliform, pH, and chemicals/potential Pollutants expected to be present on the project site. In developing this list, consideration should be given to the chemicals and potential Pollutants available for storm water to pick-up or transport to Receiving Waters, all Pollutants for which a waterbody within the Permit Area that has been listed as impaired under CWA Section 303(d)), the category of development and the type of Pollutants associated with that development category. It also refers to pollutants for which water bodies are listed as impaired under CWA section 303(d), pollutants associated with the land use type of a development, and/or pollutants commonly associated with urban runoff. Pollutants commonly associated with urban runoff include total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (decaying vegetation, animal waste, and anthropogenic litter).

Pollution – As defined in the Porter-Cologne Water Quality Control Act, pollution is "the alteration of the quality of the Waters of the U.S. by waste, to a degree that unreasonably affects either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses." Pollution may include contamination.

Pollution Prevention – Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control, treatment, or disposal.

Post-Construction BMPs – A subset of BMPs including structural and non-structural controls which detain, retain, filter, or educate to prevent the release of pollutants to surface waters during the final functional life of development.

POTW [Publicly Owned Treatment Works] – Wastewater treatment facilities owned by a public agency.

Principal Permittee – San Bernardino County Flood Control District

Priority Development Projects - New development and redevelopment project categories listed in Section XI.D.4 of Order No. R8-2010-0036.

Rainy Season – October 1 through May 31st of each year.

Receiving Waters – Waters of the United States within the Permit area.

Receiving Water Limitations – Waste discharge requirements issued by the SARWQCB typically include both: (1) "Effluent Limitations" (or "Discharge Limitations") that specify the technology-based or water-quality-based effluent limitations; and (2) "Receiving Water Limitations" that specify the water quality objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the "Receiving Water Limitations" provision is the provision used to implement the requirement of CWA section 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet water quality standards.

Redevelopment - The creation, addition, and or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; resurfacing and reconfiguring surface parking lots and existing roadways; new sidewalk construction, pedestrian ramps, or bike lane on existing roads; and routine replacement of damaged pavement, such as pothole repair.

Sediment – Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human induced land disturbance activities) is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources and does not regulate naturally occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

SIC [Standard Industrial Classification] – Four digit industry code, as defined by the US Department of Labor, Occupational Safety and Health Administration. The SIC Code is used to identify if a facility requires coverage under the General Industrial Activities Storm Water Permit.

Significant Redevelopment –The addition or creation of 5,000, or more, square feet of impervious surface on an existing developed site. This includes, but is not limited to, construction of additional buildings and/or structures, extension of the existing footprint of a building, construction of impervious or compacted soil parking lots. Significant Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, the original purpose of the constructed facility or emergency actions required to protect public health and safety.

Site Design BMPs – Any project design feature that reduces the creation or severity of potential pollutant sources or reduces the alteration of the project site's hydrology. Redevelopment projects that are undertaken to remove pollutant sources (such as existing surface parking lots and other impervious surfaces) or to reduce the need for new roads and other impervious surfaces (as compared to conventional or low-density new development) by incorporating higher densities and/or mixed land uses into the project design, are also considered site design BMPs.

Small Municipal Separate Storm Sewer System (Small MS4)[91] – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are:

(i) Owned or operated by the United States, a State, city, town, boroughs, 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 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 sewer systems

(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. (40 CFR §122.26(b)(16))

Source Control BMPs – In general, activities or programs to educate the public or provide low cost non-physical solutions, as well as facility design or practices aimed to limit the contact between Pollutant sources and storm water or authorized Non-Storm Water. Examples include: activity schedules, prohibitions of practices, street sweeping, facility maintenance, detection and elimination of IC/IDs, and other non-structural measures. Facility design (structural) examples include providing attached lids to trash containers, canopies for fueling islands, secondary containment, or roof or awning over material and trash storage areas to prevent direct contact between water and Pollutants.

Southern California Stormwater Monitoring Coalition (SMC)

State Board – California State Water Resources Control Board

Storm Water – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage.

Storm Water General Permits – General Permit-Industrial (State Board Order No. 97-03 DWQ, NPDES No. CAS000001), General Permit-Construction (State Board Order No. 99-08 DWQ, NPDES No. CAS000002), and General Permit-Small Linear Underground Projects (State Board Order No. 2003-0007-DWQ, NPDES No. CAS000005).

Structural BMPs – Physical facilities or controls that may include secondary containment, treatment measures, (e.g. first flush diversion, detention/retention basins, and oil/grease separators), run-off controls (e.g., grass swales, infiltration trenches/basins, etc.), and engineering and design modification of existing structures.

SWAMP (Surface Water Ambient Monitoring Program)

SWPPP [Storm Water Pollution Prevention Plan] – Plan to minimize and manage Pollutants to minimize Pollution from entering the MS4, identifying all potential sources of Pollution and describing planned practices to reduce Pollutants from discharging off the site.

[91] State Water Resources Control Board (SWRCB) Water Quality Order No. 2003-005-DWQ, Waste Discharge Requirements for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (General Permit)

TDS – Total dissolved solids.

Time of concentration - the time that it takes for storm runoff to travel from the most hydraulically remote point of the watershed to the outlet.

Total Maximum Daily Load (TMDL) – The TMDL is the maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under Clean Water Act Section 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

TMDL Implementation Plan -- Component of a TMDL that describes actions, including monitoring, needed to reduce Pollutant loadings and a timeline for implementation. TMDL Implementation Plans can include a monitoring or modeling plan and milestones for measuring progress, plans for revising the TMDL if progress toward cleaning up the waters is not made, and the date by which Water Quality Standards will be met (USEPA Final TMDL Rule: Fulfilling the Goals of the CWA, EPA 841-F-00-008, July 2000).

Toxicity – Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Treatment Control BMPs – Any engineered system designed and constructed to remove pollutants from urban runoff. Pollutant removal is achieved by simple gravity settling of particulate pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process.

TSS – Total suspended solids.

Urban Runoff – Urban runoff is defined as all flows in a storm water conveyance system and consists of the following components: (1) storm water (wet weather flows) and (2) authorized non-storm water discharges (See Section V of the Order) (dry weather flows).

USEPA – United States Environmental Protection Agency

Waste – As defined in California Water Code Section 13050(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.”

Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system which applies to solid and semi-solid waste which cannot be discharged directly or indirectly to water of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, nonhazardous solid waste, and inert waste.

Waste Discharge Requirements – As defined in Section 13374 of the California Water Code, the term "Waste Discharge Requirements” is the equivalent of the term "permits" as used in the Federal Water Pollution Control Act, as amended. The Regional Board usually reserves reference to the term “permit” to Waste Discharge Requirements for discharges to surface Waters of the U.S.

Waste Load Allocations (WLA) – Maximum quantity pollutants a discharger of waste is allowed to release into a particular waterway, as set by a regulatory authority. Discharge limits usually are required for each specific water quality criterion being, or expected to be, violated. Distribution or assignment of TMDL Pollutant loads to entities or sources for existing and future point sources.

Water Quality Assessment – Assessment conducted to evaluate the condition of non-storm water and storm water discharges, and the water bodies which receive these discharges.

Water Quality-Based Effluent Limits (WQBEL) - A value determined by selecting the most stringent of the effluent limits calculated using all applicable water quality criteria (e.g., aquatic life, human health, and wildlife) for a specific point source to a specific receiving water for a given pollutant.

Water Quality Criteria - comprised of numeric and narrative criteria. Numeric criteria are scientifically derived ambient concentrations developed by EPA or states for various pollutants of concern to protect human health and aquatic life. Narrative criteria are statements that describe the desired water quality goal.

Water Quality Objective – 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. [California Water Code Section 13050(h)]

Water Quality Standards – are defined as the beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.,) of water and the water quality objectives necessary to protect those uses.

Waters of the United States – Waters of the United States can be broadly defined as navigable surface waters and all tributary surface waters to navigable surface waters. Groundwater is not considered to be a Waters of the United States.

As defined in 40 CFR 122.2, the Waters of the U.S. are defined as: (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 seas; and (g) “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. 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 the EPA.

Watershed – That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as drainage area, catchment, or river basin).

WDID [Waste Discharge Identification] – Identification number provided by the State when a Notice of Intent is filed.

WQMP – Water Quality Management Plan. A plan developed to mitigate the impacts of urban runoff from Priority Development Projects.

Wet Season – October 1 through May 31st of each year, except where specifically defined otherwise in an approved TMDL Implementation Plan.

Attachment 5: MONITORING AND REPORTING PROGRAM NO. R8-2010-0036 NPDES NO. CAS618036 FOR THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT, THE COUNTY OF SAN BERNARDINO, AND THE INCORPORATED CITIES OF SAN BERNARDINO COUNTY WITHIN THE SANTA ANA REGION

AREA-WIDE URBAN AND STORM WATER RUNOFF

Attachment 6: Fact Sheet

Attachment 7: Notice of Intent Municipal Construction Activity

Attachment 8: Notice of Termination Municipal Construction Activity

Attachment 9: Notice of Intent for Municipal De-Minimus Discharges

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

RECEIVING WATERS AND URBAN RUNOFF MONITORING AND REPORTING PROGRAM NO. R8-2010-0036
NPDES NO. CAS618036
FOR
THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT, THE COUNTY OF SAN BERNARDINO, AND THE INCORPORATED CITIES OF SAN BERNARDINO COUNTY WITHIN THE SANTA ANA REGION
AREA-WIDE URBAN STORM WATER RUNOFF MANAGEMENT PROGRAM

I. GENERAL

A. 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 of this Order, and may include redistribution of monitoring resources to address TMDL needs, a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples collected.

B. The Permittees identified a priority list of pollutants of concern in the watershed based on the findings of water quality monitoring efforts conducted during previous permit terms. These pollutants and their order of priority from high to low were: (1) high priority – bacteria; (2) medium priority - metals (zinc, copper, lead); and (3) low priority - nutrients, TSS and COD. This priority ranking provides the basis for a risk-based approach to stormwater management to direct resources to the most important water quality monitoring activities.

C. All sample collection, handling, storage, and analysis shall be in accordance with 40 CFR Part 136 (latest edition) "*Guidelines Establishing Test Procedures for the Analysis of Pollutants*," promulgated by the USEPA, the guidance being developed by the State Board pursuant to Water Code Section 133383.5, or other methods which are more sensitive than those specified in 40 CFR 136 and approved by the Executive Officer, or methods documented in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).

D. 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. In addition, the Permittees are authorized to complement their urban runoff monitoring data with data from other monitoring sources, provided the monitoring conditions and sources are similar to those in the permitted area.

E. There are two types of monitoring programs that will be referenced and described in this Monitoring and Reporting Program (MRP):

1. An Integrated Watershed Monitoring Program (IWMP) that is to be developed under this MRP. The existing core storm water monitoring program (Core Monitoring) is an integral part of the IWMP. The Core Monitoring program shall be implemented until the new IWMP developed under this order is approved by the Executive Officer; and
2. Regional monitoring efforts where the Permittees participate or make monetary contributions, including TMDL-related monitoring.

F. The Permittees must coordinate monitoring efforts with other entities discharging into the Middle Santa Ana River Watershed and the Big Bear Lake Watershed. Ideally, all monitoring efforts should conform to the same quality assurance, data management, validation, and verification standards, therefore a single coordinated watershed Quality Assurance Program Plan (QAPP) should be used for all monitoring efforts. A previously developed QAPP may be used if an appropriate document exists, such as the Middle Santa Ana River Pathogen TMDL – BMP Implementation QAPP, otherwise a QAPP must be developed for this purpose. The Permittees should cooperate, as appropriate, with other MS4 Permittees (including those in Orange County and Riverside County) in the development of the QAPP, regional monitoring efforts, creation and maintenance of databases, and special studies.

G. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both [40 CFR 122.41(j)(5)]

H. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by an appropriate governmental regulatory agency.

I. For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) shall be used for all analyses, unless otherwise specified.

J. The selected water quality monitoring parameters should have a direct relationship to the designated beneficial uses in the receiving waters being monitored.

K. Metals analyses shall be performed on filtered samples in order to obtain concentration of the metals in the dissolved fraction. The detection limits for the metals analyses shall be low enough to allow for a direct comparison to the metal's criteria in the California Toxics Rule.

L. To the extent practicable, all monitoring data and monitoring locations should be integrated into the San Bernardino County GIS database system.

II. OBJECTIVES

A. Objectives: The overall goal of these monitoring programs is to provide data to support the development of an effective watershed and key environmental resources management program that focuses resources on the priority list of pollutants of concern, as defined by the risk-based analysis described in Section I, above, and Finding II.E.22 of Order No. R8-2010-0036. The following are the major objectives:

1. To provide data to support the development of an effective municipal urban runoff pollutant source control program.
2. To determine water quality status, trends, and pollutants of concern associated with urban runoff and their impact on the beneficial uses of the receiving waters. This includes determining current conditions in the receiving waters including the extent and magnitude of any impairments, and relative urban runoff contribution to the impairment.
3. To assist in identifying the sources of the priority list of pollutants of concern in urban runoff to the maximum extent practicable (e.g., including, but not limited to atmospheric deposition, contaminated sediments, other non-point sources, etc.)
4. To characterize pollutants associated with urban runoff and to assess the influence of urban land uses on receiving water quality
5. To evaluate the effectiveness of existing urban runoff water quality management programs, including an estimate of pollutant reductions achieved by the treatment and source control BMPs implemented by the Permittees.
6. To detect illegal discharges and illicit connections to the MS4s so they can be responded to or eliminated.
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 objectives in the Basin Plan.
8. To identify and prioritize the most significant water quality problems resulting from urban runoff. Order No. R8-2010-0036 establishes new program monitoring priorities through the development and implementation of a risk-based, outcome-oriented, compliance-focused program. Monitoring and sampling data shall be used to identify and prioritize the most significant water quality problems in receiving waters.
9. To evaluate costs and benefits of proposed municipal storm water quality control programs to the stakeholders, including the public.

B. The Regional Board recognizes that program modifications may be necessary to attain these objectives. The Executive Officer is hereby authorized to evaluate and to determine adequate progress toward meeting each objective and to make any modifications to the monitoring and reporting program.

III. QUALITY ASSURANCE PROGRAM PLAN (QAPP)

A. Except for TMDL monitoring where TMDL specific quality assurance plans[1,2] have been developed or will be developed, the Permittees shall submit to the Executive Officer of the Regional Board for review and approval a quality assurance/quality control plan that has been developed by qualified professionals with experience in US EPA's and California's SWAMP QAPP guidelines.

B. The QAPP shall and address all elements for the SWAMP QAPP guidelines. Data collection, field and laboratory protocol, measurements, and analysis shall be compatible with SWAMP Quality Assurance Management Plan (QAMP[3]) and with Procedures for Conducting Routine Field Measurement.

C. Where procedures are not otherwise specified in this MRP, sampling, analysis and quality assurance/quality control must be conducted in accordance with the QAMP for SWAMP.

D. For priority toxic pollutants, if the Permittees can demonstrate that a particular ML (Minimum Level) is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable 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) may be used instead of the ML listed in Appendix 4 of the SIP. The Principal Permittee must submit documentation from the laboratory to the Regional Water Board Executive Officer for approval prior to utilizing a ML that is not consistent with the MLs in the SIP.

E. The indicators of water quality selected for monitoring shall be representative of the beneficial uses in the receiving water bodies in the permittees jurisdiction.

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[1] SAWPA, Quality Assurance Project Plan for the Middle Santa Ana River Pathogen TMDL-BMP Implementation Project, April 3, 2008

[2] Big Bear Municipal Water District, Integrated Total Maximum Daily Load Implementation Program for Big Bear Lake, Quality Assurance Project Plan, April 24, 2006

[3] See State Board's SWAMP at http://www.swrcb.ca.gov/water_issues/programs/swamp/qamp.shtml

IV. INTEGRATED WATERSHED MONITORING PROGRAM (IWMP)

A. GENERAL

1. Within 12 months of adoption of this Order, the Principal Permittee, in coordination with the Co-Permittees shall review, revise as needed, and submit an Integrated Watershed Monitoring Plan (IWMP) for review and approval by the Executive Officer. At a minimum, the IWMP shall include the essential elements specified below. The IWMP shall identify all the monitoring programs, along with implementation and reporting schedules that are conducted or participated in to fulfill the monitoring objectives of this Order. The approved IWMP shall be implemented within six months of approval by the Executive Officer. In the interim, the Permittees shall continue to implement the Core Monitoring program approved under the third-term permit and any additional monitoring required under this Order.

B. COMPONENTS OF AN INTEGRATED WATERSHED MONITORING PROGRAM:

The IWMP shall, at a minimum, include the following components:

1. **EXISTING CORE MONITORING** - The current municipal stormwater monitoring for San Bernardino County until it is modified by the IWMP. This consists of receiving water monitoring and monitoring within the MS4s (See Figure 1).

   a. Receiving Water Monitoring:

      Permittees shall select a number of representative receiving water locations within their jurisdiction. These locations should be close to MS4 discharge points and should include locations where chronic and/or persistent water quality problems have been identified. The objective of receiving water monitoring is to determine if urban runoff is causing or contributing to violations of water quality standards in the receiving waters.

   b. Monitoring within MS4s:

      Permittees shall select a number of representative locations (representative of flow, duration, pollutant loads, etc.) within storm water conveyance systems within their jurisdiction. The objective of this monitoring element is to determine the pollutant loads from the MS4s and to determine their trend. This monitoring requirement maybe combined with the mass emissions monitoring described in 2, below.

2. **URBAN DISCHARGE MASS EMISSIONS MONITORING:**

   a. Representative outfall locations shall be identified and monitored to achieve the following objectives:

i. To estimate the total mass emissions of pollutants of concern from the MS4 to receiving waters.

ii. To assess trends in mass emissions associated with urban storm water runoff from the MS4s over time and evaluate potential correlations between any trends in mass emission and land use and population changes.

iii. To determine if the MS4 is contributing to exceedances of water quality standards, by comparing outfall and receiving water results to: (1) Basin Plan Water quality Objectives (WQOs); (2) EPA storm water benchmarks contained in the EPA Multi-Sector Industrial Storm Water Permit; (3) California Toxic Rule (CTR); and (4) other MS4 discharge monitoring data.

b. At least two samples shall be collected from the monitoring locations identified in a, above, during dry weather conditions and one sample from the first storm event of the rainy season (October 1 to May 31) and two more samples during subsequent storm events. The mass emissions monitoring locations shall be monitored for:

i. The flow in cubic feet per second (cfs) (the flow may be estimated);

ii. The samples from the first storm event and one of the dry weather samples shall be analyzed for the entire suite of priority pollutants. All samples must be analyzed for E. coli, nutrients (nitrates and nitrites, potassium, and phosphorous), metals, pH, TSS, TOC, organophosphorus pesticides/herbicides, and any other constituents that are known to have contributed to impairment of local receiving waters by inclusion on the 303(d) list. Dry weather samples shall be also analyzed for total petroleum hydrocarbons (EPA Method 8015M - direct injection) and oil and grease.

iii. A mass loading model shall be used to calculate the mass loadings and to the extent practicable the data shall be integrated into the San Bernardino County GIS database system.

3. ILLEGAL DISCHARGE/ILLICIT CONNECTION MONITORING

a. The Permittees shall review and update their dry and wet weather reconnaissance strategies to identify and eliminate illegal discharges and illicit connections using the Guidance Manual for Illicit Discharge, Detection, and Elimination developed by the Center for Watershed Protection[4] or any other equivalent program. The Permittees should identify appropriate monitoring locations, such as 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. hillside new developments).

[4] 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).

b. The dry weather monitoring for nitrogen and total dissolved solids shall be included as part of the illegal discharge/illicit connection monitoring program. In light of the recently adopted Nitrogen-TDS objectives for certain management zones, the Permittees shall, within 18 months of Permit adoption, submit a plan to determine baseline concentration of these constituents in dry weather runoff, if any, from significant outfall locations (36 inches or larger in diameter).

4. HYDROMODIFICATION MONITORING PLAN (HMP)

This Order requires development and implementation of a Hydromodification Monitoring Plan as part of the Watershed Action Plan (WAP) to evaluate hydromodification impacts for the drainage channels deemed most susceptible to degradation, and, where applicable the effectiveness of BMPs in preventing or reducing impacts from hydromodification within the permitted area. (Some or all of the following requirements may be satisfied by the Permittees participation in the "Development of Tools for Hydromodification Assessment and Management' Project" undertaken by the SMC and coordinated by SCCWRP).

a. The Order requires the Permittees to develop a WAP within 12 months of Permit adoption (phase 1) and 12 months following approval of phase 1 (phase 2). The WAP should identify vulnerable streams and possible control measures to minimize hydrologic changes and tools to measure any impacts on geomorphology and aquatic resources.

b. The HMP shall include:

   i. Protocols for ongoing monitoring to assess drainage channels deemed most susceptible to degradation, and to assess the effectiveness in preventing or reducing impacts from hydromodification within the permitted area.

   ii. Models to predict the effects of urbanization on stream stability within the permitted area.

5. SOURCE IDENTIFICATION AND SPECIAL STUDIES

a. The ROWD identified a priority list of pollutants of concern in the watershed based on the findings of water quality monitoring efforts. These pollutants and their order of priority from high to low were: (1) high - bacteria, (2) medium - metals (zinc, copper, lead), (3) low - nutrients (nitrate as nitrogen, total phosphorus), TSS and COD. During the Permit term, the Permittees shall assess each of the pollutants considered a concern (except bacteria, which is already being addressed by a TMDL) and prepare a strategic plan for addressing each pollutant. For some pollutants such as the metals, special studies for the development of site-specific objectives or total recoverable/ dissolved translators may be necessary.

b. During the third-term permit, a Pollutant Source Investigation and Control Plan[5] was developed and implemented to investigate elevated pollutant concentrations of coliform bacteria, zinc, copper and lead at Site 5. This Order requires continued implementation of the plan, including annual reporting and BMP effectiveness evaluation for the Site 5 drainage area.

V. REGIONAL WATERSHED MONITORING

A. Regional watershed monitoring refers to the collaboration among many agencies in and around southern California in addition to municipal stormwater agencies that are interested in watershed to regional scale monitoring. Regional monitoring can be used to assess the cumulative results of anthropogenic and natural effects on the environment and provides opportunities for comparison of the different stormwater agencies' monitoring to determine the breadth and depth of human impacts and natural variability found throughout southern California's watersheds. See Section V.B.3 below for Regional Bioassessment monitoring,

1. Some of these regional monitoring programs include the Statewide Ambient Monitoring Program (SWAMP), State Wetland's Recovery Project, USEPA Environmental Monitoring and Assessment Program (EMAP), and US Geological Survey's National Water Quality Assessment Program (NAWQA).
2. A number of regional organizations continue work in the Santa Ana River Watershed area, including the SWQSTF, SMC, SCCWRP, and universities. Participation in water-related studies or planning efforts, which may include monitoring, provides valuable information for the area-wide monitoring program. The Permittees shall participate in these regional efforts including the following:
   a. TMDL Monitoring
   b. Low Impact Development BMP Monitoring
   c. Regional Bioassessment Monitoring (SCCWRP Technical Report 539)

B. **Regional Monitoring Plans**

1. TMDL/WLA MONITORING

The Permittees shall continue to participate in TMDL monitoring programs to determine compliance with the waste load allocations (WLAs). The compliance schedules for the approved TMDLs within the permitted area are beyond the five-year permit term. This Order requires Permittees to conduct monitoring to determine the effectiveness of the BMPs implemented in reducing pollutant loads and eventually to attain WLAs by the deadlines specified in the TMDL implementation plans.

[5] 2005-2006, 2006-2007, 2007-2008 Annual Reports

Since the compliance dates for the TMDLs in this Order are outside the five-year term of this Order, the Permittees are required to monitor and report effectiveness of the BMPs specified in the TMDL Implementation Plans and this Order with respect to pollutant reduction goal(s) as one measure of progress towards attainment of WLAs in accordance with the compliance schedules specified in the TMDL Implementation Plans. If water quality standards in the impaired receiving waters are met through implementation of appropriate control measures, this would constitute compliance with the WLAs.

a. MSAR Bacteria TMDL/WLA Monitoring Plan (Figures 2 & 3)

i. On June 14, 2007, the TMDL task force members submitted a source evaluation plan and a monitoring plan. The Regional Board approved these plans on June 29, 2007, Resolution No. R8-2007-0046. A revised monitoring plan and an urban bacterial indicator source evaluation plan were approved by the Regional Board on April 18, 2008, Resolution No. R8-2008-0044 (See Figures 2 and 3). The MSAR Permittees within the MSAR watershed shall continue to conduct monitoring and source evaluations in accordance with the approved plans and report the findings in accordance with the schedules specified in the approved plans or as updated by subsequent Regional Board approved revisions.

ii. In conformance with Task 3 of the TMDL Implementation Plan contained in Resolution R8-2005-0001, the Permittees shall individually, or in conjunction with the MSAR TMDL Task Force, prepare a triennial report summarizing the data collected for the preceding 3 year period and evaluating compliance with the WLAs. The first report shall be due February 15, 2010.

iii. The Pemittees shall conduct monitoring and reporting consistent with Section V.D. of this Order to evaluate the effectiveness of the BMPs implemented in the watershed and determine their progress towards attaining compliance with the interim WQBELs, and final BMP-based WQBELS, if approved, or the final numeric WQBELS/WLAs.

b. Big Bear Lake Watershed Wide Nutrient Monitoring Plan (Figure 4)

i. For each year of in-lake nutrient and water quality monitoring under the approved plans[6], the results shall be summarized in an annual report and submitted to the Executive Officer. The Big Bear Lake Nutrient TMDL annual report is due to the Executive Officer by February 15th of each year.

ii. Currently, the Big Bear Lake MS4 Permittees are meeting the WLAs. In the future, continued compliance with the phosphorus WLA will be determined by watershed modeling. By March 31, 2010, the Big Bear Lake MS4 Permittees shall submit a final watershed modeling plan that is ready to be

[6] The 2006 Integrated TMDL Implementation Program for Big Bear Lake QAPP applies to the existing monitoring plans: Big Bear Lake Monitoring Plan, Tributary Monitoring Plan, East End Nutrient/Sediment Removal Monitoring Plan, and Bacteria Monitoring Plan

implemented and that details how the WLA will be determined and evaluated in future years. Upon approval by the Executive Officer, this watershed modeling plan shall be used to determine compliance with the WLA. The Big Bear Lake MS4 Permittees shall select a watershed model that best fits the conditions they are modeling and document the basis for that selection. Data collected under the approved watershed monitoring program shall be evaluated by the Big Bear Lake MS4 Permittees to determine if it falls within the range of dry hydrological conditions as specified in the Nutrient TMDL. The Big Bear Lake MS4 Permittees shall utilize data collected from the monitoring locations specified in the watershed monitoring program approved on May 22, 2009, as well as any other data that are deemed necessary to calibrate and validate the watershed model. The Big Bear Lake MS4 Permittees will document the basis for the selection of the model, the data evaluation and selection process, and the model calibration/validation process. The Big Bear Lake MS4 Permittees or the Big Bear TMDL Task Force, shall provide the results of the first model update by February 15, 2011, and every three years thereafter.

iii. An iterative approach is appropriate to demonstrate compliance with the phosphorus WLA in drainage areas tributary to Big Bear Lake.

iv. If watershed modeling determines exceedances of the phosphorus WLA, despite implementation of the lake management plan and the MSWMP and other requirements of this Order, the Big Bear Lake MS4 Permittees shall comply with the following procedure:

1. Each Big Bear Lake MS4 Permittee[7] upstream of the monitoring locations shall evaluate and characterize discharges from its significant outfall locations.
2. The Big Bear Lake MS4 Permittees[8] shall submit a report with proposed actions to the Executive Officer that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce pollutants that are causing or contributing to the exceedances of the WLA.
3. The report may be incorporated into the storm water annual report.

2. LOW IMPACT DEVELOPMENT (LID) BMP MONITORING

The Principal Permittee shall continue to participate in data collection and monitoring to assess the effectiveness of LID techniques in semi-arid climate as part of the SMC project titled, "Quantifying the Effectiveness of Site Design/ Low Impact Development Best Management Practices in Southern California".

[7] This task may be completed by the Big Bear TMDL Task Force.
[8] This task may be completed by the Big Bear TMDL Task Force.

3. REGIONAL BIOASSESSMENT MONITORING (SCCWRP TECHNICAL REPORT 539[9])

The Principal Permittee, on behalf of the co-Permittees, participates (through a memorandum of understanding and cooperative agreements) with the 16 member agencies of the Storm Water Monitoring Coalition (SMC) Bioassessment Working Group to conduct bioassessments on a regional basis. The Principal Permittee in coordination with SCCWRP shall ensure that a sufficient number of monitoring stations are selected for this program from locations within the permitted area.

a. The objectives of the Regional Watershed Monitoring Program overseen by the State Board's Storm Water Ambient Monitoring Program (SWAMP) and the Storm Water Monitoring Coalition (SMC) and coordinated by the Southern California Coastal Water Research Project (SCCWRP) are:
   i. To assess the current status of streams in Southern California.
   ii. To identify major stressors to aquatic life.
   iii. To monitor the trend in water quality in Southern California streams.

b. The Principal Permittee, in collaboration with the SMC, shall conduct sampling, analysis, and reporting of specified instream biological and habitat data within the 5-year permit cycle according to the protocols specified in the SCCWRP Tech Report No. 539.

c. The bioassessment shall provide information about the biological integrity of receiving waters. Baseline and trend monitoring information on the biotic and geomorphological condition of the receiving waters shall be used to evaluate the effectiveness of the storm water pollution control measures.

d. The sampling sites in each watershed unit were determined according to distribution or abundance of the three land uses: urban, agriculture, or open. Within the San Bernardino County permitted area (considered as 1.5 watershed unit), the Principal Permittee, shall ensure the collection of at least 9 samples/year.

e. Sampling events shall be conducted between 4 to 12 weeks following the last significant rainfall. No sampling shall occur within 72 hours of any measurable rainfall. The default index period will be from May 15 to July 15.

f. For long-term trend monitoring, the Principal Permittee shall ensure the collection of a minimum of one sample per year during the dry weather index period from Station ID WW-S1, Santa Ana River Reach 3 at the MWD crossing. Additional samples may be collected to improve data quality for trend analysis.

[9] "The Regional Monitoring of Southern California's Watershed SMC Bioassessment Working Group", SCCWRP, Technical Report No. 539, December 2007

At a minimum, water chemistry and aquatic toxicity should be used as indicators for trend analysis.

g. The SCCWRP Technical Report No. 539 specifies six indicators as assessment tools, including aquatic toxicity using *Ceriodaphnia* d*ubia*, water flea. The aquatic toxicity studies shall be conducted using USEPA approved methods. If conductivity is too high for survival of control organisms, then *Hyalella spp*, freshwater amphipod, may be used as a test species.

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VI. RECORD KEEPING REQUIREMENTS

A. All monitoring activities shall meet the following requirements :

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR 122.41(j)(1)]. Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored discharge, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality in the case of storm channels and flow quality in the case of streams and lakes. Representative sampling also includes development of a testable hypothesis, appropriate site selection, applicable and accepted sampling methodologies, laboratory methods, and frequency of sampling.

2. The Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports prepared as per this MRP and records of all data used to complete the Report of Waste Discharge and annual reports for a period of at least five years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Board or USEPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge [40 CFR 122.41(j)(2), CWC section 13383(a)].

3. Records of monitoring information shall include [40 CFR 122.41(j)(3)]:
   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

4. Calculations for all effluent limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this MRP [40 CFR 122.41(l)(4)(iii)].

5. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 CFR 122.41(k)(2)].

VII. PROGRAM EFFECTIVENESS ASSESSMENT AND REPORTING

A. 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 under penalty of perjury.

B. The Principal Permittee has been monitoring urban runoff and receiving waters since the first MS4 permit term. It is recognized that some of the objectives noted in Section II may not have been fully attained during the previous MS4 permit terms. With the first annual report due after adoption of this Order, the Principal Permittee must submit an evaluation of the progress achieved to date and propose modifications to the monitoring program to achieve full compliance with the objectives of this monitoring program, discussed in Section II.

C. The Permittees shall be responsible for the timely submittal to the Principal Permittee of all required information/materials needed to comply with this Order. All such submittals shall be signed by a duly authorized representative of the Permittee under penalty of perjury.

D. The data transmittals to the Regional Board shall be in the form developed by the Storm Water 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 be universally shared and evaluated from various programs.

E. The Permittees shall submit an annual progress report to the Executive Officer and to the Regional Administrator of the USEPA, 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:

1. A review of the status of program implementation and compliance (or non-compliance) with the schedules contained in this Order;

2. An assessment of the effectiveness of control measures established under the illicit discharge elimination program and the Municipal Storm Water Management Plan (MSWMP). 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;

3. 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. The effectiveness evaluation shall consider changes in land use and population on the quality of receiving waters and the impact of development on sediment loading within receiving waters and recommend necessary changes to program implementation and monitoring needs.

4. The annual report shall include an overall program assessment. The Permittees are encouraged to use the program assessment methodology described in the 2006 ROWD. The Permittees should determine, to the extent practicable, water quality improvements and pollutant load reductions resulting from implementation of various program elements. The Permittees may also use the "Municipal Storm Water Program Effectiveness Assessment Guidance" developed by the California Storm Water Quality Association in May 2007 as guidance for assessing program effectiveness at 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.

5. The annual report shall include a status report on the development and implementation of the Hydromodification Monitoring Program developed as part of the WAP.

6. Each Permittee shall develop, update, implement, and review its local implementation plan (LIP) to address program modifications and improvements identified during the program assessment.

7. A summary and analysis of monitoring results from the previous year and any changes to the monitoring program for the following year;

8. A financial summary report as described in Section XIX.B of this order; including:
    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.

9. A draft workplan which describes the proposed implementation of the LIPs, and MSWMPs for next fiscal year. The workplan shall include clearly defined tasks, responsibilities, and schedules for implementation of the storm water program and each Permittee's action plans for the next fiscal year;

10. Major changes to any of the previously submitted plans/policies; and

11. An assessment of the Permittees compliance status with the Receiving Water Limitations, Section VI of the Order, including any proposed modifications to the MSWMP and WQMP if the Receiving Water Limitations are not fully achieved.

VIII. REPORTING SCHEDULE

All reports required by this Order shall be submitted to the Executive Officer in accordance with the following schedule:

Reporting Schedule (Order R8-2010-0036)			
Permit No.	**ITEM**	**COMPLETION TIME AFTER PERMIT ADOPTION OR FREQ.**	**REPORT DUE DATE**
III.A.1.n	Principal Permittee shall coordinate a review of areawide documents to determine the need for update or revisions	within 18 months of adoption of this Order	
III.A.1.0	Principal Permittee shall develop and implement a model Local Implementation Plan (LIP) each program element as described per the MSWMP	within 6 months of adoption of this Order	
III.A.2.a	Principal Permittee shall develop and implement a Principal Permittee-specific LIP, based on the areawide model LIP	within 18 months of adoption of this Order	
III.B.1	Permittees to develop and implement a Permittee-specific LIP for its jurisdiction. The LIP shall describe the Permittee's legal authority, its ordinances, policies and standard operating procedures; identify departments and personnel for each task and needed tools and resources.	within 18 months of adoption of this Order	
III.B.2.e	Each Permittee shall review and revise its MS4 facility maps	As needed	Annually
III.C	Permittees shall evaluate the storm water management structure and the Implementation Agreement and determine the need for any revision	As needed	Annually
V.D.1.a.ii	MSAR Permittees shall submit MSAR reports of watershed-wide monitoring program for wet and dry season respectively	May 31 and Dec 31	Starting in 2010, annually thereafter
V.D.1.a.iii	MSAR Permittees shall submit MSAR comprehensive reports	Feb 15	Starting in 2010 and every three years thereafter
V.D.1.a.iv	MSAR Permittees shall submit MSAR semi-annual reports	January 31 & July 31	Annually
V.D.1.a.v	MSAR Permittees shall revise MSWMP in accordance with MSAR-TMDL Implementation program	Nov 15, 2010	Annual report

Reporting Schedule (Order R8-2010-0036) Continued			
Permit No.	**ITEM**	**COMPLETION TIME AFTER PERMIT ADOPTION OR FREQ.**	**REPORT DUE DATE**
V.D.1.a.vi	MSAR Permittees shall revise the WQMP in accordance with MSAR-TMDL implementation program	Nov 15 of every year	Annual report
V.D.1.a.vii	MSAR Permittees shall amend the LID in accordance with the revised MSWMP/WQMP	Within 90 days after RB approves revisions	Nov 15 of each year
V.D.2.b.ii	MSAR Permittees shall prepare for approval the draft CBRP to achieve compliance for Dry Weather Conditions	December 31, 2010	
V.D.2.b.ii	MSAR Permittees shall submit Final version of CBRP	90 days after receiving comments from the Regional Board	
V.D.4.e	Big Bear Lake MS4 Permittees shall submit a plan of various in-lake treatment technologies	No later than February 26, 2010	
V.D.4.f	Big Bear Lake MS4 Permittees shall submit for approval a plan and schedule for updating the existing Big Bear Lake watershed nutrient model and the Big Bear Lake in-lake nutrient model	No later than March 31, 2010	
V.D.4.g	Big Bear Lake MS4 Permittees shall submit for approval a proposed plan and schedule for in-lake sediment nutrient reduction for Big Bear Lake	No later than April 15, 2010	
V.D.4.i	The Big Bear Lake-Lake Management Plan shall be reviewed and revised as necessary at least once every three years	As necessary, at least once every 3 years	
V.D.4.j	Big Bear Lake MS4 Permittees shall submit annual report summarizing data from water quality monitoring programs and evaluating compliance (Big Bear Lake TMDL)	February 15, 2010	Annually
V.D.2.b.ii	MSAR Permittees shall prepare for approval the draft CBRP to achieve compliance for Dry Weather Conditions	December 31, 2010	
V.D.4.k	Big Bear Lake MS4 Permittees shall submit final watershed modeling plan to be implemented (Big Bear Lake TMDL)	March 31, 2010	
V.D.4.k	Big Bear Lake MS4 Permittees shall provide results of the first model update	February 15, 2011	
V.D.4.l	Big Bear Lake MS4 Permittees shall revise MSWMP, WQMP, LIP as necessary	November 15	Annual report
V.D.4.m.2	Big Bear Lake MS4 Permittees shall submit report to EO describing BMPs to reduce sources of phosphorous	November 15	Annual report

Reporting Schedule (Order R8-2010-0036) Continued			
Permit No.	**ITEM**	**COMPLETION TIME AFTER PERMIT ADOPTION OR FREQ.**	**REPORT DUE DATE**
V.D.4.n	Revise LIP to incorporate requirements from TMDL implementation	As needed	As necessary
V.D.5.a	City of Big Bear Lake shall continues to implement Phase 2 monitoring program	on-going	on-going
VI.D	If there is discharge causing or contributing to exceedance, Permittees shall notify either by phone or by e-mail and, thereafter submit a report satisfying D.a to D.e	Within 30 calendar days	
VI.E	Permittees shall submit any modifications, if required by the Executive Officer	Within 30 calendar days of notification	
VI.F	Permittees shall revise the storm water management programs (MSWMP and LIP) and monitoring program to incorporate the additional BMPs that will be implemented	Within 60 calendar days following EO approval	
VII.D	Permittees shall promulgate ordinances that would specify control measures for known pathogen or bacterial sources such as animal wastes if those types of sources are present within their jurisdiction.	Within 3 years of Order adoption	
VII.F	The Permittees shall notify owners of other MS4 systems outside the Permittees' jurisdiction, regarding the regulatory requirements for control of pollutants in MS4 discharges and provide copy to the Regional Board.	Annually	
VII.G	The Permittees shall review water quality ordinances and evaluate effectiveness	Annually	Annual Report
VII.J	The Permittees shall submit a certification statement signed by legal counsel, that the Permittee has obtained all necessary legal authority	Within one (1) year of Order adoption	
VII.K	The Permittees shall review adequacy of ordinances, implementation and enforcement response procedures with respect to the above items.	Annually	Annual Report
VIII.A	The Permittees shall develop pro-active IC/ID Program		Annual Report
IX.F	Permittees with septic systems in their jurisdiction shall develop an inventory of septic systems within its jurisdiction and establish a program to ensure that failure rates are minimized	Within two years of Order adoption	
X.A.3	The Permittees shall update database and inventory system containing inspections, facilities	at least once/year	Annually

Reporting Schedule (Order R8-2010-0036) Continued			
Permit No.	**ITEM**	**COMPLETION TIME AFTER PERMIT ADOPTION OR FREQ.**	**REPORT DUE DATE**
X.A.4	The Permittees shall Develop risk-based, compliance focused strategy for inspection of construction, industrial, and municipal facilities	within 18 months of Order adoption	
X.A.12	The Permittees shall Document, evaluate and report the effectiveness of enforcement procedures in achieving prompt and timely compliance.	annually	Annual Report
X.D.6	The Permittees shall Principal Permittee shall notify all mobile businesses operating within the County concerning the minimum source control and pollution prevention measures	Within 36 months of adoption of this Order	
X.D.7	The Principal Permittee, in coordination with the Permittees shall develop an enforcement strategy to address mobile businesses	Within 36 months of adoption of this Order	
X.E.1	Each Permittee shall develop and implement a residential program to reduce the discharge of pollutants from residential facilities to the MS4s to the maximum extent practicable	Within 36 months of adoption of this Order	
X.E.7	The Permittees shall evaluate residential program effectiveness	First annual report after adoption of Order	Annual report
XI.B.3.a	The Principal Permittee shall develop a Watershed Action Plan, Phase 1	Within 12 months of adoption of this Order	
XI.B.3.b	The Principal Permittee shall develop a Watershed Action Plan, Phase 2	Within 12 months of approval of Exec, Officer of Phase 1 report.	

Reporting Schedule (Order R8-2010-0036) Continued			
Permit No.	**ITEM**	**COMPLETION TIME AFTER PERMIT ADOPTION OR FREQ.**	**REPORT DUE DATE**
XI.B.4	The Permittees shall review the watershed protection principles and policies in the General Plan or related documents (such as Development Standards & Project Guidance, Zoning Codes, Conditions of Approval,) to determine consistency with the Watershed Action Plan.	Within three years of Order adoption	Annual Report
XI.B.4	The Permittees shall report the above findings and schedule of revisions	Annually	Annual Report
XI.C.4	Each Permittee shall incorporate the results of the above information into its LIP and its project approval process.	Within 24 months of adoption of this Order	
XI.D.2	The Principal Permittee shall coordinate the revision of the WQMP Guidance and Template to include new elements required under this Order.	Within 18 months of adoption of this Order	
XI.E.1	Each Permittee shall identify barriers to implementing LID	Within 18 months of adoption of this Order	
XI.E.2	Each Permittee shall provide Regional Board a copy of its report to DWR on its updated landscaped ordinance.	Simultaneous with notification to DWR	
XI.E.5	The Permittees shall review and update the Water Quality Management Plan Guidance and Template to incorporate LID principles	Within 18 months of adoption of this Order	
XI.E.9	The Permittees shall submit a copy of the updated Water Quality Management Plan Guidance and Template for review and approval by the Executive Officer.	Within 18 months of adoption of this Order	
XI.F.1	The Permittees shall develop standard design and PCBMP guidance for municipal road projects	Within 24 months of adoption of this Order	
XI.G.1	Permittees may grant waiver of BMPs with justification documents to the EO	Within 30 days prior to Permittee approval	

Reporting Schedule (Order R8-2010-0036) Continued			
Permit No.	**ITEM**	**COMPLETION TIME AFTER PERMIT ADOPTION OR FREQ.**	**REPORT DUE DATE**
XI.H.1 & H.4	The Permittees shall develop and implement standard procedures and tools, such as WQMP checklist, project close-put procedures, and include in the LIP.	Within 18 months of adoption of this Order	
XI.I.2	The Permittees shall conduct follow-up inspection of the post-construction BMPs	Prior to the rainy season within 3 years	Every 3 years thereafter.
XI.J	The Permittees shall establish mechanism to track project ownership		Annual Report
XI.K.2	The Permittees shall develop a database to track operation and maintenance of post-construction BMPs.	Within 12 months of adoption of this Order	
XII.E	The Permittees shall develop and maintain BMP guidance for the control of those potentially polluting activities 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.	Within 12 months of adoption of this Order	
XIII.E	The Permittees shall evaluate,the inspection and cleanout frequency of drainage facilities,	Annually	Annual report
XV.B	The Permittees shall notify the EO of proposed de-minimus type of discharges by submitting a NOI	At least 15 days before de-minimus discharge	
XVI.A.1 & A,2	The Principal Permittee shall update, revise and develop a training program including a training schedule, curriculum content, and defined expertise and competencies for storm water managers, inspectors, maintenance crew, municipal contractors, those involved in the review and approval of WQMPs, and those preparing and/or reviewing CEQA documentation	Within 24-48 months of adoption of this Order	

Reporting Schedule (Order R8-2010-0036) Continued			
Permit No.	**ITEM**	**COMPLETION TIME AFTER PERMIT ADOPTION OR FREQ.**	**REPORT DUE DATE**
XVI.D	The Principal Permittee shall provide and document training to applicable public agency staff on the updated Municipal Activities and Pollution Prevention Strategy (MAPPPS). and any other applicable guidance and procedures	Annually	Annual Report
XVI.H	Each Permittee shall adequately train any of its staff involved with storm water related projects and the implementation of this Order	Within 6 months after assignment then annually prior to rainy season	Annual report
XVIII.B	Permittees shall evaluate the MSWMP to determine the need for any revisions in Order to reduce pollutants in MS4 discharges to the maximum extent practicable.	Annual Report	October 1
XIX.B	Permittees shall prepare and submit a financial summary to the Executive Officer of the Regional Board	Annually	
XXII.A	Permittees shall prepare and submit ROWD permit renewal application		No later than 180 days of Permit expiration
MRP IV. A	Permittees shall review, revise as needed, and submit the Integrated Watershed Monitoring Plan (IWMP) for review and approval by the Executive Officer.	Within 12 months of adoption of this Order	
MRP IV.B.3.b	Permittees shall submit a plan to determine baseline concentrations of N/TDS	Within 18 months of Order adoption	
MRP V. B.1.a.ii	Permittees shall revise the MSWMP to incorporate a plan and a schedule to achieve necessary triennial bacterial source reduction for meeting the phosphorus indicator WLAs	February 15, 2010	Annual Report

Date: 1-29-10

Ordered by G J Thibeault
Gerard J. Thibeault
Executive Officer

Figure 1: Current Stormwater Core Monitoring Stations (Sites 2, 3, 5, 8, and 10)

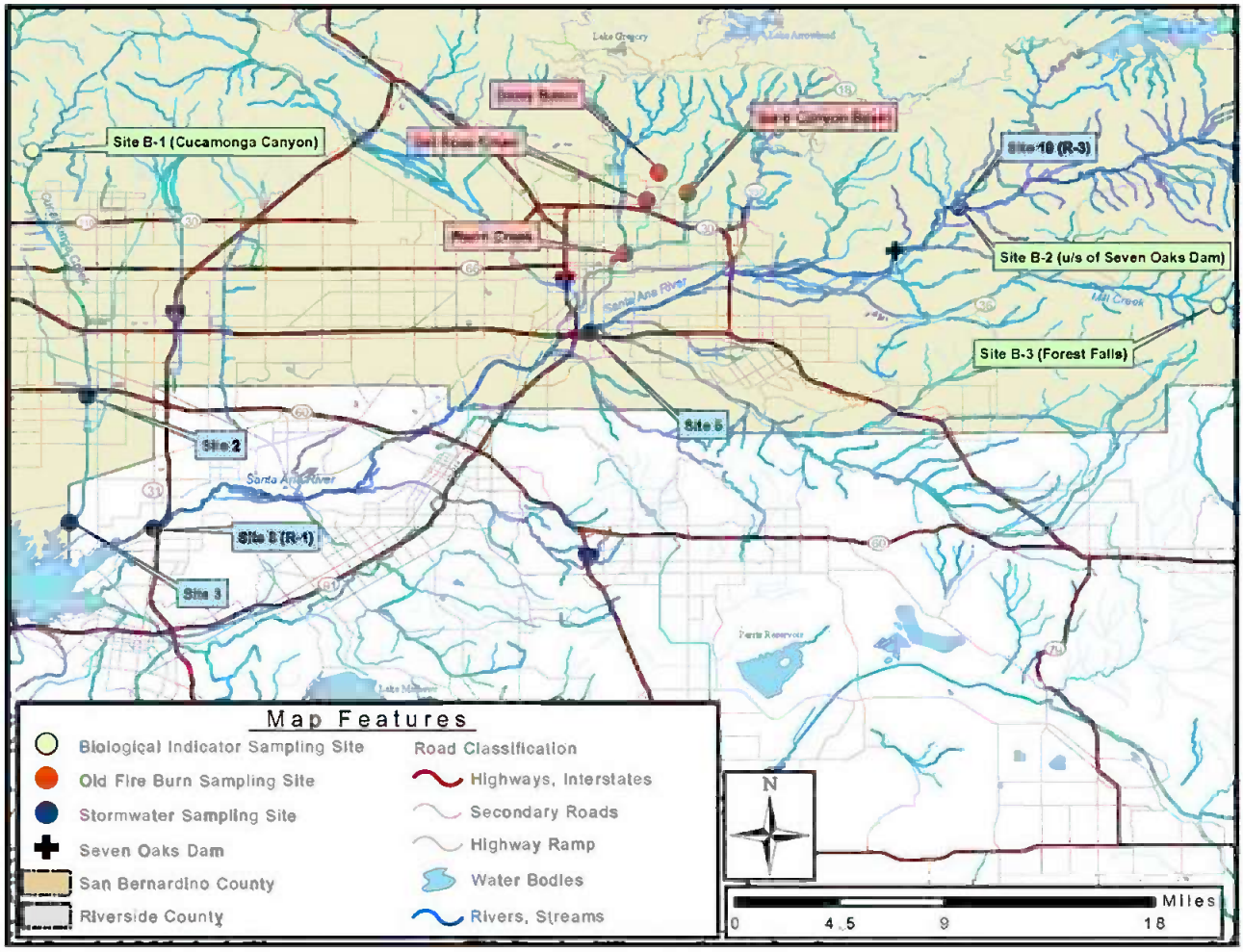


Figure 2: MSAR TMDL Watershed-wide Monitoring Locations

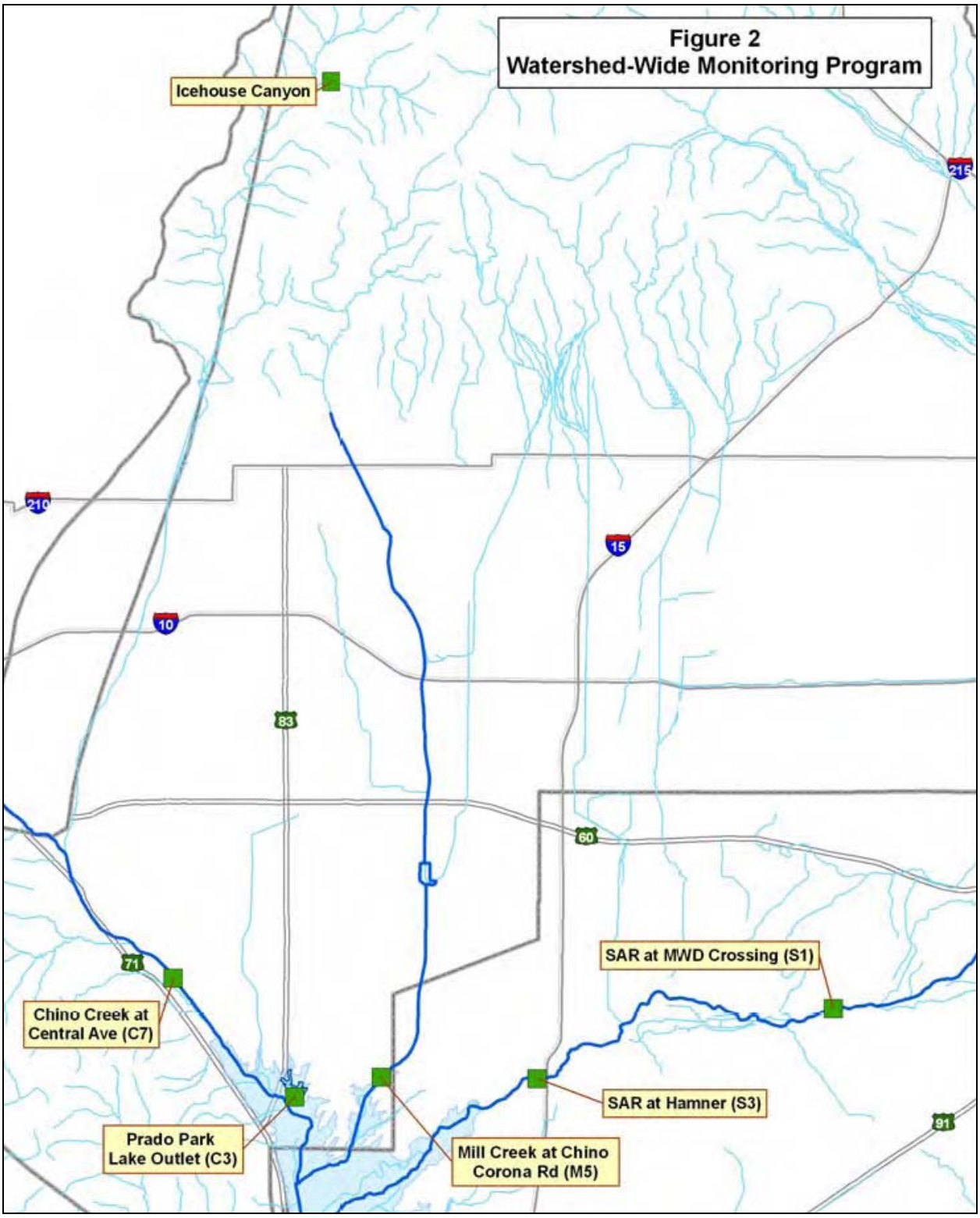


Figure 3: MSAR TMDL USEP Monitoring Locations

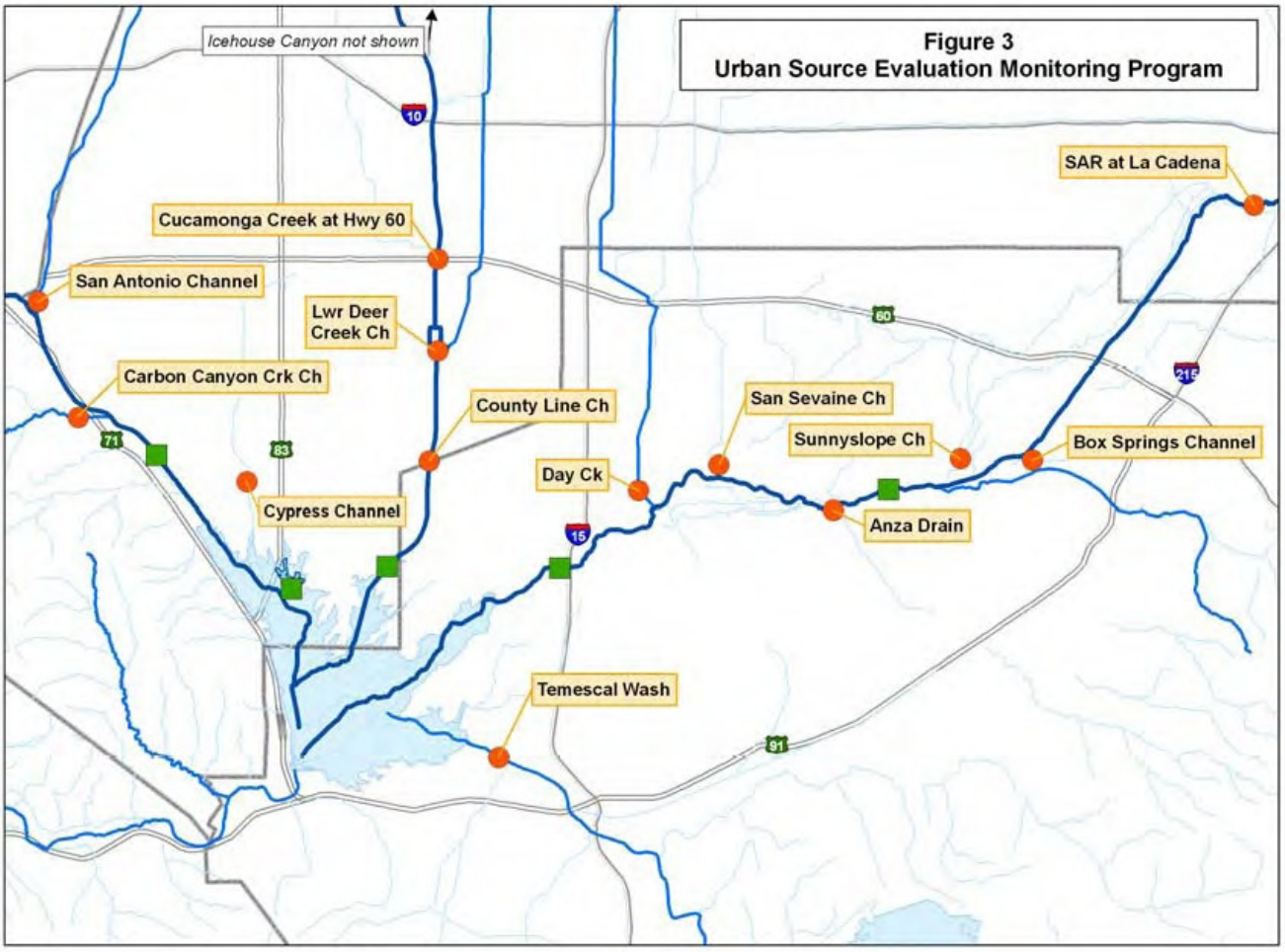
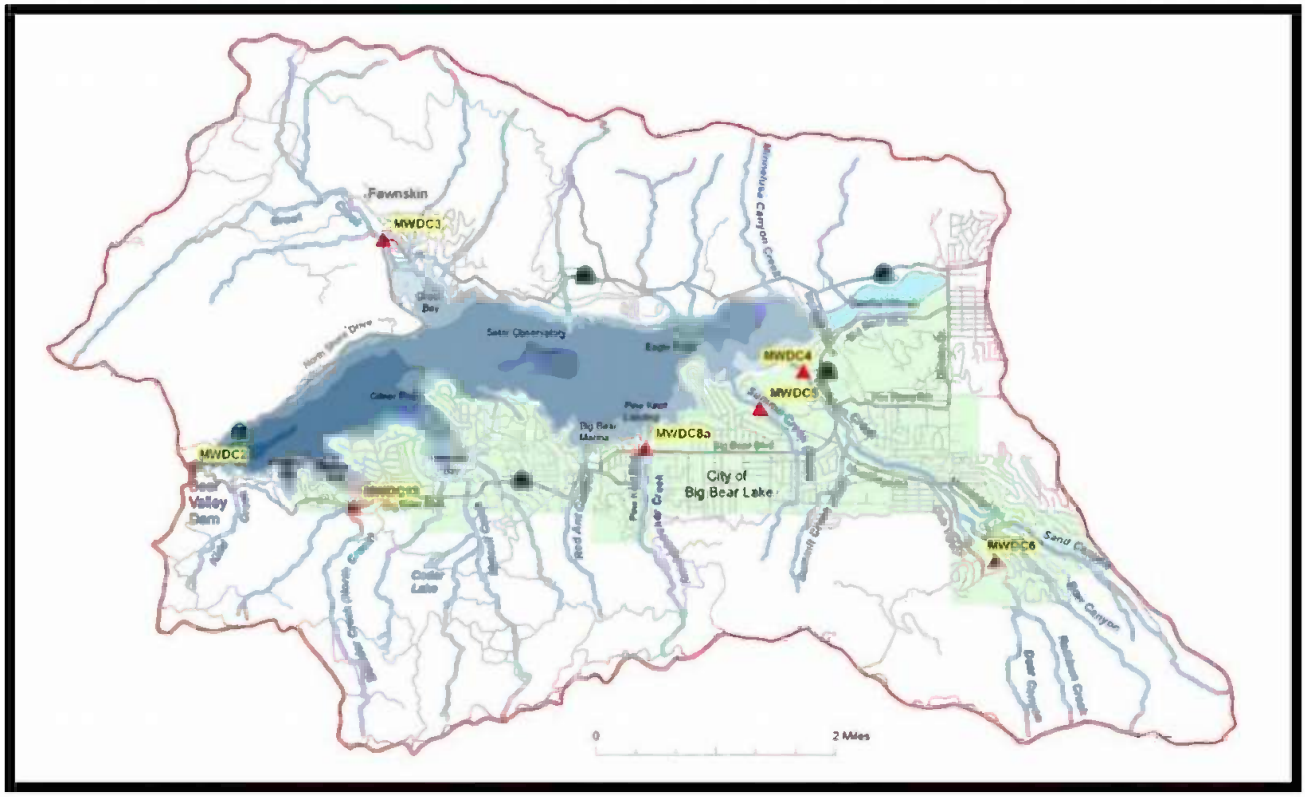


Figure 4: Big Bear Lake Nutrient TMDL Watershed-Wide Monitoring Locations



State of California

California Regional Water Quality Control Board

Santa Ana Region

3737 Main Street, Suite 500

Riverside, CA 92501- 3348

FACT SHEET

January 29, 2010

ITEM: 10

SUBJECT: Waste Discharge Requirements for the San Bernardino County Flood Control District (SBCFCD), the County of San Bernardino, and the Incorporated Cities of San Bernardino County within the Santa Ana Region, Area-wide Urban Storm Water Runoff Management Program, San Bernardino County, Order No. R8-2010-0036 (NPDES No. CAS618036)

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 from some of the persistent toxic pollutants (DDT[1], PCB[2], TBT[3]) were addressed through manufacturing and use restrictions and through cleanup of contaminated sites. On the other hand, pollution from land runoff (including pollutants from atmospheric deposition, urban, suburban and agricultural sources) was largely unregulated 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 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) started regulating municipal storm water runoff in 1990.

It is also critical to manage non-point sources, such as runoff from agricultural sources, in order to effectively prevent or remedy water quality impairment. In 2000, the State Water Resources Control Board and the California Coastal Commission developed a

[1] DDT: Dichlorodiphenyltrichloroethane
[2] PCB: Polychlorinated biphenyl
[3] TBT: Tributyltin

Non-Point Source Pollution Control Program. This program was approved by the USEPA and NOAA[4] and is being implemented by a number of agencies.

The attached pages contain information concerning an application for renewal of waste discharge requirements and an NPDES permit. Order No. R8-2010-0036, NPDES No. CAS618036, prescribes waste discharge requirements for urban storm water runoff[5] from the cities and the unincorporated areas in San Bernardino County within the jurisdiction of the Regional Board. As defined by 40 CFR 122.26(b)(13), storm water includes storm water runoff, snowmelt runoff, surface runoff and drainage. "Storm water" is defined as urban runoff and snowmelt runoff consisting only of those discharges which originate from precipitation events. Storm water is that portion of precipitation that flows across a surface to the storm drain system or receiving waters.

Urban runoff is defined as all flows in a storm water conveyance system and consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water (authorized under Section V of the Order, dry weather flows).

On October 26, 2006, the San Bernardino County Flood Control District (SBCFCD, the Principal Permittee) and the County of San Bernardino, in cooperation with the cities of Big Bear Lake, Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa (Co-Permittees, hereinafter collectively referred to as Permittees or Dischargers), submitted a Report of Waste Discharge (ROWD)) for renewal of their area-wide NPDES storm water permit. The permit renewal application was submitted in accordance with the requirements specified in the previous NPDES storm water permit (Order No. R8-2002-0012). The permit application also follows guidance provided by Regional Board and State Water Resources Control Board (State Board) staff, and the United States Environmental Protection Agency (USEPA). Order No. R8-2002-0012 expired on April 27, 2007 and 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. R8-2010-0036 regulates discharges of stormwater and urban runoff[6] from the upper Santa Ana watershed to waters of the U.S.

II. REGULATORY BACKGROUND/CLEAN WATER ACT REQUIREMENTS

As storm water flows over streets, parking lots, construction sites, and industrial, commercial, residential, and municipal areas, it can mobilize 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 elevated levels of pathogens (bacteria, viruses, protozoa), sediment, trash, fertilizers (nutrients, mostly nitrogen and phosphorus compounds), oxygen-demanding substances (decaying and/or decomposable matter), pesticides (e.g., DDT, chlordane, diazinon, chlorpyrifos, etc.)

[4] NOAA:National Oceanic and Atmospheric Administration

[5] Urban Storm Water Runoff includes authorized non-storm water as per Section V of the Order and storm water runoff, collectively referred to as urban runoff (also see glossary).

[6] For purposes of this Order, urban runoff includes storm water and authorized non-storm water discharges as per Section V of the Order.

heavy metals (cadmium, copper, chromium, lead, zinc, etc.), and petroleum products (oil & grease, PAHs[7], petroleum hydrocarbons, etc.). If not properly managed and controlled, urbanization can change the stream hydrology and increase pollutant loading to receiving waters. In general, as a watershed undergoes urbanization, pervious surface area decreases, runoff volume and velocities increase, riparian habitats and wetland habitats decrease, the frequency and severity of flooding may 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, cause toxicity to marine organisms, and impact human health and the environment.

If not properly controlled, urban runoff could be a significant source of pollutants in waters of the U.S. Table 1 includes a list of pollutants and their sources, and some of the adverse environmental consequences resulting from urbanization.

The Permittees in San Bernardino County conducted urban runoff monitoring and determined that for a number of constituents (e.g., bacteria, copper, lead, nutrients), urban runoff quality exceeded the Basin Plan objectives, CTR criteria, and/or USEPA's storm water benchmarks. The permit renewal application submitted by the Permittees (2006 ROWD) ranked bacterial contamination as the highest priority urban runoff problem[8] within the permitted area.

(Left intentionally blank)

[7] PAHs (Polycyclic aromatic hydrocarbons) – a hydrocarbon containing two or more aromatic rings. PAHs are persistent, bioaccumulative, and toxic pollutant. PAHs occur in oil, coal, and tar deposits, and are produced as byproducts of fuel burning. Sources include industrial processes, transportation, energy production and disposal activities.

[8] 2006 Report of Waste Discharge (ROWD)

Table 1[9]. Pollutants/Impacts of Urbanization on Waters of the U.S.

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 (DDT, diazinon, chlorpyrifos)	Urban runoff; residential, commercial, industrial, and farm use; agricultural runoff	Legacy pesticides (DDT, chlordane, dieldrin) have been banned; still persists in the environment; some of the other pesticide uses have been 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 (NRC, 1993a, 2000a).
Petroleum products (oil, grease, petroleum hydrocarbons, PAHs)	Runoff and atmospheric deposition from land activities; shipping and tanker operations; accidental spills; oil gas production activities; natural seepage; PAHs from internal combustion engines	Petroleum hydrocarbons can affect bottom organisms and larvae; spills affect birds, mammals and aquatic life.
Radioactive isotopes	Atmospheric fallout, industrial and military activities	Bioaccumulation may pose human health risks where contamination is heavy.
Sediments	Erosion from farming, construction activities, forestry, mining, development; river diversions; 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.

[9] Adapted from Boesch, D.F., R.H. Burroughs, J.E. Baker, R.P. Mason, C.L. Rowe, and R.L. Siefert. 2001. Marine Pollution in the United States: Significant Accomplishments, Future Challenges. Pew Oceans Commission, Arlington, Virginia.

Pollutants	Sources	Effects and Trends
Plastics and other debris	Boats, ships, fishing nets, containers, trash, urban runoff	Entangles aquatic 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.
Pathogens (bacteria, protozoa, viruses)	Sewage, urban runoff, livestock, wildlife, and discharges from boats and cruise ships.	Pose health risks to swimmers and consumers of seafood.
Alien species	Ships and ballast water, fishery stocking, aquarists	Displace native species, introduce new diseases; growing worldwide problem (NRC 1996).

The (CWA) prohibits the discharge of any pollutant to navigable waters from a point source unless an NPDES permit authorizes the discharge. 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 USEPA promulgated the final Phase I storm water regulations. The storm water regulations are contained in 40 CFR Parts 122, 123 and 124.

This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under federal Clean Water Act section 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B).) This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (*Natural Resources Defense Council, Inc. v. U.S. E.P.A.* (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.) The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (*cf. Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, the provisions of this Order to implement total maximum daily loads (TMDLs) are federal mandates. The federal Clean Water Act requires TMDLs to be developed for water bodies that do not meet federal water quality standards. (33 U.S.C. § 1313(d).) Once the U.S. Environmental Protection Agency or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation. (40 C.F.R. § 122.44(d)(1)(vii)(B).)Second, the local agency permittees' obligations 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. With a few inapplicable exceptions, the Clean Water Act regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (Wat. Code, § 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The Clean Water Act and the Porter-Cologne Water Quality Control Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Resources Control Board decisions, this Order does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Order, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.
Third, the local agency permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have 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 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. To the extent, the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord *County*

of San Diego v. State of California (1997) 15 Cal.4th 68, 107-108.) Likewise, the Permittees have voluntarily sought a program-based municipal storm water permit in lieu of a numeric limits approach. (See *City of Abilene v. U.S. E.P.A.* (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The local agencies' voluntary decision to file a report of waste discharge proposing a program-based permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIIIB, Section (6) of the California Constitution.

The areawide NPDES permit for San Bernardino 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 CWC, and the State Board's Plans and Policies.

The Basin Plan is the basis for the Regional Board's regulatory programs. The Basin Plan incorporates plans and policies adopted by the State Board by reference. The Basin Plan was developed and is periodically reviewed and updated in accordance with relevant federal and state laws and regulations, including the CWA and the CWC. 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, 1983, and 1995 Basin Plans. The 1995 Basin Plan was updated in February 2008[10]. Amendments to the Basin Plan included new nitrate-nitrogen and total dissolved solids (TDS) objectives for specified management zones and new nitrogen and TDS management strategies applicable to both surface and ground waters and various Total Maximum Daily Loads (TMDLs) and Implementation Plans that had been adopted for several impaired water bodies within the region.

Water Code Section 13241 requires that certain factors must be considered–when water quality objectives are established. These factors include economics and the

[10] http://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml

need for developing housing in the Region. (The latter factor was added to the CWC in 1987).

During the third-term permit (R8-2002-0012) 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 (SWQSTF). The SWQSTF is closely monitoring actual and potential beneficial uses of surface waters within the region. Based on the findings, it is likely that the SWQSTF will recommend changes to the current beneficial use designations and water quality objectives specified in the Basin Plan. This Order may be reopened to incorporate any changes to the water quality standards. 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 MS4s within the Santa Ana River Watershed in San Bernardino County are tributary to various water bodies (inland surface streams, lakes and reservoirs) of the state (see Attachment 2 for a list of surface waterbodies within the Permitted area). The beneficial uses of these water bodies include municipal and domestic supply, agricultural supply, industrial service and process supply, groundwater recharge, 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 and preservation of rare, threatened or endangered species, spawning, reproduction and development of aquatic habitats and estuarine habitat. The ultimate goal of this Permit and the related urban storm water management program is to protect the beneficial uses of the receiving waters.

IV. PERMITTED AREA

The permitted area is delineated by the Santa Ana-Lahontan Regional Board boundary line on the north and northeast, the Santa Ana-Colorado River Basin Regional Board boundary on the east, the San Bernardino-Riverside County boundary on the south and southeast, the San Bernardino-Orange County boundary on the southwest, and the San Bernardino-Los Angeles County boundary on the west (see Attachment 1). The permittees serve a population of approximately 1.5 million, occupying an area of approximately 620 square miles[11]. For the entire county, the population estimated as of July 1, 2008 is 2.06 million[12]. The latest figures from the San Bernardino County Storm

[11] 2006 Report of waste Discharge.
[12] State of California, Department of Finance, Population Estimates and Components of Change by County, July 1, 2000-2008. Sacramento, California, December 2008

Water Program 2007-2008 Annual Report estimated 378 miles of aboveground channels and 485 miles of underground storm drain channels, for a total of 863 miles in the project area. Approximately seven percent (7%) of the San Bernardino County surface area 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 feeding operations. However, the CWA specifically excludes discharges composed entirely of return flows from irrigated agriculture and nonpoint source agricultural activities. The concentrated animal feeding operations within the Region are regulated under the Regional Board's General Permit for Dairies, Order No. R8-2007-0001, NPDES No. CAG018001. Areas of the County not addressed or which are excluded under the storm water regulations and areas not under the jurisdiction of the Permittees are excluded from coverage under this permit. These excluded areas and activities include the following:

- Federal lands and state properties, including, but not limited to, military bases, national forests, hospitals, schools, colleges and universities, and highways;
- Native American tribal lands;
- Agricultural lands; and
- Utilities and special districts.

The Regional Board will coordinate with these entities to implement programs that are consistent with the requirements of this Order. 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. The Regional Board may also consider such facilities for coverage under its NPDES permitting scheme pursuant to USEPA Phase II storm water regulations.

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 WQMP requirements for post-construction 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 requirements[13] for the Permit Area.

V. WATERSHED MANAGEMENT/UPPER SANTA ANA RIVER BASIN

To regulate and control storm water discharges from the San Bernardino County area to the San Bernardino County MS4s, an area-wide approach is expected to be the most effective. The entire storm drain system in San Bernardino County is not controlled by a single entity; San Bernardino County, the SBCFCD, several cities, State Department of Transportation (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

[13]The State General Construction Permit Order No. 2009-009-DWQ Section XIII.

County and the SBCFCD, there are a number of significant contributors of urban storm water runoff to these storm drain systems. These include: large institutions, such as 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 San Bernardino Valley Municipal Water District and Inland Empire Utilities Agency; the National Forest Service; state parks, and entertainment centers such as Pharaoh's Lost Kingdom Park in Redlands, Fiesta Village Family Fun Park in Colton, and other motorsports facilities scattered throughout the County. The management and control of the entire flood control system cannot be effectively carried out without the cooperation and efforts of all these entities. Also, it would not be effective to issue a separate storm water permit to each of the entities within the permitted area whose land/facilities drain into the county storm drain systems and ultimately to waters of the U. S. The Regional Board has concluded that the best management option for the San Bernardino County area is to issue an area-wide storm water permit. Some of the MS4s in the project area discharge into MS4s controlled by other entities, such as the County of Riverside, the County of Orange, and the County of Los Angeles.

Cooperation and coordination among all the stakeholders are essential for efficient and economical management of the watershed. Regional Board staff will facilitate coordination of monitoring and management programs among the various stakeholders, where necessary.

An integrated watershed management approach for urban runoff is consistent with the Strategic Plan (2008-2012[14]) for the State and Regional Boards and the draft California Water Plan Update[15]. A watershed wide approach is also necessary for implementation of the load and waste load allocations to be developed under the TMDL process. The MS4 permittees and all the affected entities are required to participate in regional or watershed solutions, where appropriate, instead of project-specific and fragmented solutions.

The pollutants in urban runoff originate from multiple 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. In the 2006 ROWD, the Permittees proposed a watershed approach based on a prioritized risk to beneficial uses.

1. SUB-WATERSHEDS AND MAJOR CHALLENGES

The Santa Ana River Watershed in San Bernardino County can be subdivided into the following sub-watersheds:

[14] State Water Resources Control Board, Strategic Plan Update, 2008-2012, September 2, 2008
[15] http://www.waterplan.water.ca.gov/docs/cwpu2009/1208prd/vol2/UrbanRunoff_PRD_09.pdf

A. *UPPER SANTA ANA RIVER WATERSHED*

The Upper Santa Ana River Watershed includes the upper reaches of the Santa Ana River (Reaches 4, 5 and 6) and its tributaries.

1. Reach 4 of the Santa Ana River: Reach 4 of the Santa Ana River is the portion of the River from Mission Boulevard bridge in Riverside to the San Jacinto fault (Bunker Hill Dike) in San Bernardino. There is perennial flow in this reach of the River, mostly from the upstream discharges of treated municipal wastewater. Much of this reach is also maintained as a flood control facility. This reach of the River is posted to warn against water contact recreation, due to microbial problems. The wastewater discharges from the sewage treatment plants to this reach of the River are tertiary treated and are not expected to be sources of microbial contamination. This reach is identified as an impaired waterbody for pathogens in the 303(d) list, scheduled for TMDL completion in 2019. Lytle Creek and Cajon Creek are tributaries to this reach of the River.

   Other water quality problems along this reach of the River include the buildup of total dissolved solids (TDS, dissolved salts or minerals) and nitrogen, largely in nitrate form. The buildup of TDS and nitrates can impact downstream beneficial uses, including groundwater recharge. The buildup of TDS and nitrate is mostly due to agricultural uses, including dairies and the application of fertilizers, municipal and industrial wastewater discharges, and reuse and recycling operations. A complex set of programs and policies are included in the Basin Plan to address this problem, including a water supply plan, a wastewater management plan, and a groundwater management plan. Other elements of the Basin Plan include the non-point source program and the storm water program. The Basin Plan identifies the Statewide General Permits and the MS4 permits as the regulatory tools for storm water management in the Basin. In light of the recently adopted Nitrogen-TDS objectives for certain management zones, this Order requires the Permittees to determine baseline concentration of these constituents in dry weather runoff, if any, from significant outfall locations. The Order also includes effluent limitations for TDS and nitrates under dry weather conditions.

2. Reach 5 of the Santa Ana River: This reach of the River extends from the San Jacinto Fault in San Bernardino to the Seven Oaks Dam. Most of this reach of the River is maintained as a flood control facility and is dry, except during storm flows and operational releases from the dam. Major tributaries to this reach include San Timoteo Creek, City Creek, Plunge Creek, and Warm Creek. These tributaries are also usually dry, except for the discharge of treated wastewater from Yucaipa Valley Water District to San Timoteo Creek and from the City of Beaumont to Coopers Creek (a tributary to San Timoteo Creek). These wastewater discharges flow for a short distance and percolate into the ground. No major water quality problems have been identified in this stretch of the River or its tributaries.

3. Reach 6 of the Santa Ana River: This reach includes the River upstream of Seven Oaks Dam. Major tributaries include Bear Creek, Forsee Creek, and Rattlesnake Creek. Flows consist mostly of snowmelt and storm water runoff. There are no documented water quality problems in this reach of the river and no listed impairments.

B. CHINO BASIN WATERSHED

The Chino Basin Watershed covers about 405 square miles and lies largely in the southwestern corner of San Bernardino County, and part of western Riverside County. This permit only covers those portions of the watershed that are within San Bernardino County and under the jurisdiction of this Board. Surface drainage is generally southward, from the San Gabriel Mountains toward the Santa Ana River and Prado Flood Control Basin. Major surface waterbodies in the Chino Basin Watershed include:

- San Antonio Creek
- Chino Creek
- Cucamonga Creek
- Day Creek, and
- Deer Creek

Although it was originally developed as an irrigated agricultural area, and then as dairies, the watershed is more recently being steadily urbanized. The municipalities under this permit in the Chino Basin Watershed include Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, Rialto, and Upland. The Chino-Corona Agricultural Preserve had the highest concentration of dairy animals in the nation until very recently manure and wastewater from dairy operations contain elevated levels of nutrients, salts, and bacteria. The ground and surface water quality in the area have been adversely impacted by bacteria (surface water), nutrients and salts.

The dairies within the Region are regulated under the General Waste Discharge Requirements for Concentrated Animal Feeding Operations (Dairies and Related Facilities) within the Santa Ana Region (Board's General Dairy Permit), Order No. R8-2007-001, NPDES No. CAG018001. The General Dairy Permit allows discharge of storm water from dairies only for storms exceeding a 24-hour 25-year frequency. Portions of the area lack flood control facilities, and storm runoff from these areas is predominantly carried by flows on and parallel to roadways The San Bernardino and Riverside County Flood Control Districts, in cooperation with local municipalities, have coordinated to construct flood control facilities in the area.

On April 19, 2004, construction began on the project known as County Line Channel (also known as Eastvale San Bernardino Line 2-13) sponsored by San Bernardino County Flood Control District, Riverside County Flood Control

and Water Conservation District, and the City of Ontario. The three-mile-long concrete-lined drainage channel along the Riverside/San Bernardino county line will intercept runoff. Overland surface storm flows from the City of Ontario and County of San Bernardino portions of the watershed is typically collected by roadways and the flows are discharged into the Cucamonga Creek Channel. The project design enables storm water to be captured and channeled into an existing facility with the capacity to contain the 100-year flow and will accommodate major storm drain laterals in the future to prevent commingling of urban runoff with agricultural drainage. In addition to these benefits, the project prevents the degradation of recharged groundwater upstream of the Chino-Corona Preserve. This project has been completed.

To comply with the recently established nitrogen/TDS objectives, groundwater problems (mostly TDS and nitrate) in the Chino Basin Watershed are being addressed through a comprehensive watershed management plan. As part of this plan, desalters are being built to increase the salt removal from the groundwater through a pump and treat system for contaminated groundwater in the southern part of Chino Basin. One desalter (Chino I Desalter) has been operational since August 2000, and a second one, known as the Chino I Expansion/Chino II Desalter Project, was completed in the spring of 2006.

(Also see discussions below regarding TMDLs for the Middle Santa Ana River watershed.)

C. *BIG BEAR LAKE WATERSHED*

The Big Bear Lake watershed is located in the San Bernardino Mountains. Major waterbodies in this watershed include:

- Big Bear Lake
- Baldwin Lake (currently a dry lakebed)
- Stanfield Marsh
- Shay Meadows
- Rathbone (Rathbun) Creek
- Summit Creek
- Grout Creek
- Knickerbocker Creek

Big Bear Lake is a high mountain reservoir occupying a relatively small, east-to-west oriented basin. The basin supports a large number of recreational activities. Lake recreational activities include fishing, swimming, boating and water skiing. Areas adjacent to the lake are used for camping, skiing, hiking, equestrian trails and other outdoor activities. Water in the lake is also used for municipal supplies. A number of water quality problems have been identified for the lake.

The 2006 303(d) list of impaired water bodies (see below) designated the following waterbodies in this sub-watershed as impaired: Big Bear Lake (nutrients, copper and mercury); Grout Creek (metals and nutrients); Knickerbocker Creek (metals and pathogens); Summit Creek (nutrients); and Rathbone Creek (nutrients and siltation). The problem pollutants have been identified by the Regional Board as coming from resource extraction activities, urban runoff, snow skiing facilities, construction and land developments, and non-point sources. In conjunction with local stakeholders, the Big Bear Lake Nutrient TMDL for Dry Hydrologic Conditions has been developed and is being implemented. For other pollutants, work is underway to develop TMDLs.

2. CWA SECTION 303(d) LIST AND TMDLS*:*

The 2006 water quality assessment conducted by the Regional Board[16] identified a number of waterbodies within the Region as impaired waterbodies, under Section 303(d) of the CWA[17]. These are waterbodies where the designated beneficial uses are not met and the water quality objectives are being exceeded. These waterbodies were placed on the CWA Section 303(d) list of impaired waters. The impaired waterbodies in San Bernardino 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 sources, load allocations (LA) for non-point sources and natural background sources, with a margin of safety. The TMDLs are the basis for limitations established in waste discharge requirements.

This Order incorporates TMDLs that have been adopted for bacterial indicators in the Middle Santa Ana River Watershed and nutrients (phosphorus) for dry hydrological conditions in Big Bear Lake. On August 26, 2005, the Regional Board adopted Resolution No. R8-2005-001 amending the Basin Plan to incorporate Bacterial Indicator TMDLs for Middle Santa Ana River Watershed Waterbodies. On April 21, 2006, the Regional Board adopted Resolution No. R8-2006-0023 amending the Basin Plan to incorporate a Nutrient TMDL for Dry Hydrological Conditions for Big Bear Lake. A Mercury TMDL for Big Bear Lake is currently under development, and TMDLs are scheduled for development for all pollutants identified in Table 2. The stakeholders in this watershed are collaborating in the development and implementation of the TMDLs.

[16] On April 24, 2009, the Regional Board adopted an Integrated List of Impaired Waters Under Clean Water Act Sections 305(b) and 303(d), Resolution No. R8-2009-0032.

[17] 2006 CWA Section 303(d) list of water quality limited segments (http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/r8_06_303d_reqtmdls.pdf)

Federal regulations (40 CFR 122.44(d)(vii)(B)) require that the NPDES permits be consistent with the applicable wasteload allocations in the TMDLs. This Order requires the Permittees to implement BMPs designed to reduce pollutants to achieve applicable wasteload allocations by the compliance dates in the approved TMDLs.

For 303(d) listed waterbodies without a TMDL, the Permittees currently require certain categories of new and significant re-development projects that drain into these impaired waterbodies to treat post-construction runoff with BMPs of medium to high treatment effectiveness. This Order further requires the Permittees to develop BMPs and/or strategies as part of a Watershed Action Plan and continue their participation in the TMDL development.

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Table 2

CLEAN WATER ACT SECTION 303(D) LISTED WATERBODIES & TMDL SCHEDULE[18]

Waterbody	Hydro Unit	Size Affected	Pollutant Stressor	Source	Priority	TMDL Schedule	Permittees
Big Bear Lake	801.710	2970 acres 2970 acres 2970 acres 2970 acres 2970 acres 2970 acres 2970 acres 2970 acres	Copper Mercury[19] Metals Noxious aquatic plants Nutrients Sedimentation/Siltation[20] PCBs (Polychlorinated biphenyls)	Resource Extraction Resource Extraction[21] Resource Extraction Construction/Land development Construction/Land development Snow Skiing Activities Construction/Land development Snow Skiing Activities Unknown	Medium Medium Medium Medium Medium Medium Medium Medium	2007 2007 2007 2006 2006 2006 2019	City of Big Bear Lake County of San Bernardino
Summit Creek	801.710	1 mile	Nutrients	Construction/Land Development	Medium	2008	City of Big Bear Lake, County of San Bernardino
Knickerbocker Creek	801.710	2 miles 2 miles	Metal Pathogens	Unknown Non-point Source Unknown Non-point Source	Medium	01/03 – 01/05 Sole Source	City of Big Bear Lake, County of San Bernardino
Grout Creek	801.720	2 miles 2 miles	Metal Nutrients	Unknown Non-point Source Unknown Non-point Source	Medium	01/02 – 0105 2008	City of Big Bear Lake, County of San Bernardino
Rathbone Creek	801.720	2 miles 2 miles	Nutrients Sedimentation/Siltation	Unknown Non-point Source Snow Skiing Activities	Medium	2008 2006	City of Big Bear Lake, County of San Bernardino
Mountain Home Creek, East Fork	801.700	1 mile	Pathogens	Unknown Non-point Source	Low	2019	County of San Bernardino
Mountain Home Creek	801.580	4 miles	Pathogens	Unknown Non-point Source	Low	2019	County of San Bernardino
Mill Creek (Prado Area)	801.250	4 miles	Nutrients Suspended Solids	Agriculture, Dairies Dairies	Medium Medium	2019 01/00 – 01/05	Ontario, Rancho Cucamonga, Upland, SBCFCD, County of San Bernardino
Mill Creek, Reach 1	801.580	5 miles	Pathogens	Unknown Non-point Source	Low	2019	Redlands, SBCFCD, County of San Bernardino
Mill Creek, Reach 2	801.580.	8 miles	Pathogens	Unknown Non-point Source	Low	2019	SBCFCD, County of San Bernardino
Santa Ana River, Reach 4	801.270	12 miles	Pathogens	Non-point Source	Low	2019	Colton, Rialto, Highland, Grand Terrace, Redlands, City of San Bernardino, SBCFCD, County of San Bernardino
Lytle Creek	801.400	18 miles	Pathogens	Unknown Non-point Source	Low	01/08 – 01/11	City of San Bernardino, SBCFCD, County of San Bernardino
Chino Creek, Reach 1	801.210	2 miles	Nutrients	Agriculture Dairies	Medium	2019	Chino, Chino Hills, SBCFCD, County of San Bernardino
Prado Park Lake	801.210	60 acres	Nutrients	Non-point Source	Low	01/08 – 01/11	Chino, Chino Hills, County of San Bernardino

[18] Based on STATE BOARD 2006 CWA Section 303(d) List of Water Quality Limited Segments, Santa Ana Regional Water Quality Control Board, USEPA Approved June 28, 2007 (http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/r8_06_303d_reqtmdls.pdf)

[19] Big Bear Lake is recommended for delisting for copper in the Proposed 2008 303(d)-305(b) Integrated Report

[20] Big Bear Lake is recommended for delisting for sedimentation/siltation in the Proposed 2008 303(d)-305(b) Integrated Report

[21] Resource extraction was removed as a potential source for Mercury in Big Bear Lake and replaced with atmospheric deposition in the Proposed 2008 303(d)-305(b) Integrated Report

VI. FIRST, SECOND AND THIRD-TERM PERMITS; URBAN STORM WATER RUNOFF POLLUTION CONTROL PROGRAMS/POLICIES

Prior to EPA's promulgation of the final storm water regulations, the counties of Orange, Riverside and San Bernardino requested areawide NPDES permits for storm water runoff. On August 29, 1990, the Regional Board issued Order No. 90-136 to the San Bernardino County permittees (first-term permit). In 1996, the Board adopted Order No. 96-32 (second-term permit). On October 25, 2002, the Board adopted Order No. R8-2002-0012 (third-term permit). These 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 Municipal Storm Water Management Plan (MSWMP) to reduce pollutants in urban storm water runoff to the maximum extent practicable (MEP).
3. Required the discharges from the MS4s to implement Best Management Practices (BMPs) to the MEP 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 and maintain legal authority to enforce storm water regulations.
6. Required monitoring of dry weather flows, storm flows, and receiving waters and conduct program assessments.
7. Required the permittees to inventory, prioritize and inspect construction sites and industrial and commercial facilities based on threat to water quality.
8. Required the permittees to develop a restaurant inspection program to address practices that may have an impact urban runoff quality such as: oil and grease disposal; trash bin area management; parking lot cleaning; spill clean-up; and maintenance of grease traps and interceptors.
9. Required the permittees to review and approve Water Quality Management Plans for categories of new development and significant redevelopment projects to address the impact of post-development runoff on water quality and hydromodification.
10. Required the permittees to develop a unified response plan to respond to any sewage spills that may have an impact on receiving water quality (Sanitary Sewer Overflow Unified Sewage Response Plan, July 1, 2003).

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). The 1993 DAMP included a number of BMPs

and a very extensive public education program. The monitoring programs for the first and second-term permits included 10 monitoring stations within streams and flood control channels. The number of monitoring stations was later reduced to 5 stations to allow the Permittees to apply resources to a bacterial source monitoring program. The Executive Officer approved a delay in implementing the bioassessment requirement of the third-term permit to allow the development of indices of biological integrity that could be applied to inland waters. Subsequently, a regional bioassessment monitoring program was initiated by the Surface Water Ambient Monitoring Program (SWAMP) to determine the conditions of the receiving water in a more holistic manner. This Order requires the Permittees to participate in the regional bioassessment monitoring program. The findings and conclusions from these monitoring stations and monitoring programs (Riverside County, Orange County and others are participating in this regional effort) 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 MSWMP included identification and elimination of illicit connections and illegal 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 previous term permits are as follows:

1. Interagency Agreements and Coordination: The Permittees established a program management structure through an interagency Implementation Agreement and established a Management Committee with designated representatives from each of the Permittees to guide the program. The Permittees reviewed and revised the Implementation Agreement as part of the ROWD.

2. Ordinances, Plans and Policies: The Permittees completed a review of their storm drain ordinances and enforcement procedures for prohibiting discharges to the MS4s and for taking appropriate enforcement actions. The Area-Wide Enforcement Guidelines were subsequently prepared to support enforcement actions and to introduce consistency among the Co-Permittees' enforcement actions. In 2004, the Permittees replaced their Model Guidelines for New Development and Redevelopment with the Water Quality Management Plan Guidance and Template (WQMP), which was approved in 2004 and updated in 2005. The Permittees continue to provide training for appropriate public agency personnel on the Municipal Activities Pollution Prevention Strategy (MAPPS). The goal of this program is to ensure that public agency facilities and associated activities do not become a source of pollutants in storm water runoff. These "facilities" include the Permittees' vehicle and equipment fueling and fleet maintenance yards, corporate yards, hazardous materials storage facilities, material transfer and storage facilities, waste management and storage, fire stations, animal shelters, and municipal swimming pools. The MAPPS lists the

potential pollutants for these facilities and provides a list of BMPs for controlling these pollutants.

3. Municipal Inspections: The Permittees completed the development of the MS4 Solution Database. This database houses the inventory of construction, industrial, and commercial sites/facilities within each Permittee's jurisdiction. The inventory is regularly updated with new information.

   The Permittees developed and distributed BMP guidelines for the control of pollutants from mobile vehicle maintenance, carpet cleaning, commercial landscape maintenance, and pavement cutting activities.

4. HCOC Mapping: In early 2005, the Permittees initiated a a GIS-based mapping program to identify stream channels in the area that could be susceptible to excessive erosion and should be considered in assessing hydrologic conditions of concern (HCOC). Upon completion of this project, it will be integrated into the Watershed Action Plan.

5. Illegal Discharge/Illicit Connections: Litter, Debris and Trash Control: The Permittees completed a general characterization of the trash collected from the permitted area and are using this information to develop BMPs specifically targeting the major sources of trash in urban runoff.

6. Municipal Facilities/Activities: The San Bernardino County Flood Control District completed 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.

   The Permittees developed and distributed BMP guidelines for the control of household use of fertilizers, pesticides, herbicides, and other chemicals, and pavement cutting activities.

   The Permittees worked with the County Fire Chiefs Association to 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 that could feasibly be implemented to address flows that occur during emergency firefighting activities.

7. Program Review: The annual reports and the Report of Waste Discharge included an effectiveness assessment of various program elements. Based on the monitoring results and the program effectiveness assessments, the 2006 ROWD recommended a shift to compliance-based outcomes measured primarily by compliance with water quality objectives and TMDL implementation. The ROWD also included an analysis of the impact of urban storm water runoff on the beneficial uses and recommended a risk-based approach to address problems associated with urban storm water runoff.

The requirements specified in this Order are consistent with the approach recommended in the ROWD including the TMDLs adopted by the Regional Board and approved by the State and the USEPA.

8. Public Education: In addition to developing and distributing fact sheets, brochures, and flyers with BMP information to control the discharge of pollutants in urban runoff, the Permittees have utilized a number of other avenues to convey this message to the public. These include: (1) public service announcements utilizing a multi-media approach, such as newspapers, radio, and television; (2) presentations at elementary schools and high school automotive classes; (3) educational displays at libraries and public buildings throughout the permitted area; (4) a point-of-purchase campaign with fact sheets containing information on integrated waste management, proper use of pesticides and fertilizers and integrated pest management programs; (5) a point-of-discharge campaign by warning the public about the dangers of waste disposals into the storm drains by stenciling all storm drain inlets; and (6) a web-site with links to other programs and services offered by the Permittees to combat storm water pollution including a 24-hour hotline to report spills, leaks and any illegal discharges to the MS4s. The Permittees have already met or exceeded the goal of a minimum of 5 million impressions per year by targeting all residents, businesses, commercial and industrial establishments within the Permitted area.

   The Permittees also completed a public awareness survey to determine the effectiveness of their existing public and business education strategy. The permittees participated in joint outreach programs with other entities including, but not limited to,, SAWPA[22], Caltrans, and other municipal storm water programs.

   The most effective programs and public education efforts should be continued to reinforce the importance of public participation and awareness to control pollutants in urban storm water runoff.

   The proposed Order includes additional requirements for an effective residential program as irrigation and nuisance flows from residential areas continue to be significant sources of nutrients, pesticides and other pollutants (from over fertilization or improper use of fertilizers, pesticides and other household chemicals).

9. Public Agency Training: During the second-term permit, the Permittees developed and conducted an 8-hour training program on the Municipal Activities Pollution Prevention Strategy (MAPPS). The MAPPS training program provided a basic storm water training and task-specific education for all targeted Permittee staff. These included key staff involved in sewage system maintenance, storm drain system inspection and maintenance, landscape maintenance, road and street maintenance, and key staff at maintenance and storage facilities.

[22] SAWPA: Santa Ana Watershed Project Authority

The MAPPs training was expanded in the third-term permit to include illegal discharge identification, response, and reporting; industrial/commercial inspection program, new and redevelopment program and public agency activities program. During the third-term permit, the Permittees refined their training program and developed web-based training modules to provide better access to the training program. The online training program is enhanced by various other training efforts, including live presentations and on the job training.

However, Regional Board staff conducted audits of the urban runoff program for each of the Permittees and determined that many of the Permittees' storm water program staff and contract staff were not adequately trained. The fourth-term permit requires the Permittees to develop appropriate curriculum for staff at various levels to make the storm water program more effective.

10. Watershed Activities: The Principal Permittee represented the Permittees in various watershed efforts dedicated to improving water quality, gathering technical information to support the MS4 program, TMDL activities, and regional and sub-regional monitoring programs. (See Section VII, below for a list of these programs.)

    The Permittees worked with other local and State agencies to provide a consistent urban storm water pollution control message to the public. These programs included:

    a. Public Health (Safe Drinking Water Program, Vector Control Program, Housing/Property Improvement Program, and Food Protection Program),

    b. Fire Department - Hazardous Materials Division, (Household Hazardous Waste Program, Emergency Response and Enforcement, Field Services, and Local Oversight Program),

    c. Economic Development / Public Services Group (Flood Control Function, Transportation Function, Waste Management Function, Regional Parks Function, Land Use Services and Code Enforcement Function), and

    d. San Bernardino County Special Districts (Operations Divisions consisting of Street Lighting Districts, Recreation and Parks Districts, Road Districts; Water and Sanitation Division consisting of nine water districts and seven sanitation districts).

    The Regional Board and the Permittees recognize the importance of watershed-based plans to address such complex issues related to the control of pollutants from various sources in urban storm water runoff. The fourth-term Permit includes requirements for the development and implementation of a Watershed Action Plan (see Section VIII, below).

11. Related Activities: The Permittees stabilized a number of flood control channels, constructed a sediment basin, expanded an existing basin, and identified, eliminated or properly documented illicit connections to the MS4s.

12. Water Quality Monitoring: The Permittees continue to monitor water quality at five sites for a variety of constituents. Three of the five sites were outfall locations selected to represent the quality of storm water from the drainage area; two sites serve as receiving water monitoring sites. The Permittees also participate in a number of TMDL-related or other regional or sub-regional monitoring programs. A number of programs related to the monitoring programs were completed during the third-term permit (see Section VII, below). These monitoring programs continue to indicate that urban storm water runoff contains elevated levels of pollutants (see Section VII, below).

    The fourth-term Permit includes additional monitoring requirements consistent with the federal regulations (40 CFR 122.48) and California Water Code Sections 13267 and 13383.

VII. WATER QUALITY ASSESSMENTS

An accurate and quantifiable measurement of the impact of the various elements of the storm water management programs is difficult, due to the temporal and spatial variations in storm water runoff quality, incremental nature of BMP implementation, the lack of comprehensive 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) programmatic assessments such as monitoring of the amount of household hazardous waste collected and disposed off at appropriate disposal sites, the amount of used oil collected, the amount of debris removed, etc.

Water quality monitoring data submitted to date document a number of exceedances of water quality objectives specified in the Basin Plan, CTR criteria and/or USEPA's storm water benchmarks for fecal coliform bacteria, total suspended solids (TSS), nutrients, COD and metals. Toxicity has also been observed at some of the monitoring locations. The 303(d) list of impaired waterbodies within the Region (see Table 2, above) also indicates that urban runoff is a significant source for these impairments. These findings indicate that urban storm water runoff continues to cause or contribute to water quality impairments.

A comparison of wet weather water quality monitoring data for 2000-2006[23] with that from 1994-1999[24] shows that the median concentrations for most constituents have not changed significantly. Furthermore, monitoring data for the period 1994-2006 indicate that median concentrations of wet weather composite samples at monitoring stations[25]

[23] 2006 ROWD
[24] 2002 ROWD
[25] Drainage at Site 2 (Cucamonga Creek @ Hwy 60) is predominantly urban, influenced by commercial and industrial land uses with some contribution from open space/rural and residential land uses. The predominant land use at Site 3 (Cucamonga Creek @ Hellman) is agricultural, but there is contribution from open space/rural, and discharge from a municipal wastewater treatment plant between Sites 2 and

2, 3, and 5 exceeded the USEPA benchmarks for TSS, COD, NO_3-N, and several metals. With the exception of Site 10 (Santa Ana River upstream of Seven Oaks Dam, tributary to mostly undeveloped areas), coliform bacteria concentrations were far above the Basin Plan water quality objectives. These data support the need for continued monitoring and additional control measures to control the discharge of pollutants from the MS4s.

To understand background indicator bacteria levels in the watershed necessary for the implementation of the MSAR TMDL, the Permittees conducted background indicator bacteria studies. Samples were collected quarterly from August 2000 to June 2006 during dry weather (<0.1 inch precipitation) at three sites (Cucamonga Canyon Site, Seven Oaks Dam Site, and Forest Falls Site) with no direct impact from urban runoff, sanitary sewer systems, or POTW discharge. The Seven Oaks Dam Site is located upstream of the dam and corresponds to stormwater monitoring Site 10. The Forest Falls Site is downstream of forested areas with few permanent campsites. Statistics from samples collected from December 2003 to June 2006, suggested that the Seven Oaks Dam Site (Site 10) had the highest concentrations of enterococcus and fecal streptococcus present, and that Cucamonga Creek Site and the Forest Falls Site have lower concentrations. Due to the predominance of non-detect data, similar determinations cannot be made for total coliform, *E. coli*, or fecal coliform concentrations. However, overall, samples taken at the Forest Falls Site exhibited the lowest concentrations of these types of indicator bacteria[26].

The Principal Permittee conducted an analysis of the receiving water monitoring data collected during the last 15 years for a number of monitoring sites (Sites 2, 3, 8[27], and 10[28]). This analysis indicates that the most significant water quality problem associated with urban storm water runoff is bacterial contamination. The Permittees' monitoring data were then compared to monitoring data available from other sources (NAWQA, RWQCB 305(b) Assessment) to determine beneficial use impacts and pollutants causing the impacts. This analysis was then used to prioritize problem areas and to propose a risk-based approach to address these problems.

Based on the evaluation of monitoring data described above, the 2006 ROWD prioritized the pollutants of concern with regards to storm water management as follow:

a. High Priority: Coliform bacteria
b. Medium Priority: Zinc, copper, lead
c. Low Priority: Nutrients, COD, TSS

During the prior permit terms, there was an increased focus on watershed management initiatives and coordination among the municipal permittees in Orange, Riverside and San

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3. Monitoring site 5 (Hunts Lane n/o Hospitality Lane) is within a constructed storm drain system and flow is mostly from commercial and light industrial land uses with some urban contribution.

[26] 2005-2006 Annual Report.

[27] Site 8 station is located in the Santa Ana River (SAR) at Hamner Avenue, runoff is mostly from urban land uses.

[28] Site 10 station is located at SAR, upstream of Seven Oaks Dam, runoff is mostly from open/rural areas.

Bernardino Counties. These efforts resulted in a number of regional monitoring programs and other coordinated program and policy developments. The Principal Permittee continues to be an active participant in the Storm water Quality Standards Task Force (SWQSTF), the Big Bear TMDL and Middle Santa Ana River (MSAR) Bacterial Indicator TMDL, and the Storm Water Monitoring Coalition Studies. In addition to the TMDL implementation and monitoring activities, the Permittees participate in the Regional Integrated Freshwater Bioassessment Monitoring Program and the BMP Effectiveness Project to assess the effectiveness of LID techniques.

The Permittees, as participants in the SMC, have completed several monitoring-related activities, including Comparative Evaluation of Microbial Source Tracking Techniques, Model Monitoring Program Guidance, Peak Flow Study, and Laboratory Inter-Calibration.

It is anticipated that with continued implementation of the MSWMP, the ROWD and the 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/2006 ROWD & MSWMP

The NPDES permit renewal application (2006 ROWD) and the areawide Municipal Storm Water Management Program (MSWMP) describe the programs and policies the Permittees are proposing to implement during the fourth-term permit. The 2006 ROWD and MSWMP are the principal guidance documents for urban storm water management programs within San Bernardino County.

During the first three permit cycles, the Permittees focused on characterizing storm water quality and establishing a fundamentally sound program in each of the key areas identified in EPA regulations [40 CFR §122.34(b)]: (1) public education and outreach; (2) public involvement/participation; (3) illicit discharge detection and elimination; (4) construction site storm water runoff control; (5) post-construction storm water management in new development and redevelopment; and (6) pollution prevention/good housekeeping for municipal operations.

The sampling data collected over the years have been used to prioritize the most significant water quality problems in the receiving waters. As indicated in Section VII, above, the highest priority for the storm water program is the reduction of bacterial contamination.

For the fourth-term Permit, the Permittees have proposed to develop and implement a risk-based, outcome-oriented, compliance-focused program and will shift storm water management program from process-based outcomes which were mostly measured through completion of programmatic or administrative tasks. Under the fourth-term Permit, compliance will be determined based on attaining water quality standards and compliance with the wasteload allocations specified in the Total Maximum Daily Loads (TMDLs). Risk-based assessment and management aim to reallocate and reapportion program resources to target pollutants-of-concern that pose the greatest threat to human health or the environment. An outcome-oriented program places much greater

emphasis on demonstrating the effectiveness of various implementation activities. Direct measures (such as changes in water quality, tons of hazardous waste collected, etc.) will be preferred over indirect measures (such as advertising impressions, events attended, etc.). In particular, where TMDLs have been adopted for specific pollutants, the Permittees will shift available resources to be compliance-focused, to achieve compliance with water quality objectives. Program elements will be targeted toward executing the requirements identified in the TMDL implementation plans and pollution reduction goals specified in this Order. The primary goal of a compliance-focused program is to ensure storm water discharges consistently meet the water quality objectives identified in the Basin Plan. A comprehensive water quality monitoring program that is proposed in the fourth-term Permit will be used to evaluate the success of this new initiative.

This Order requires the Permittees to develop and implement comprehensive plans designed to achieve compliance with the wasteload allocations by the dates specified in the approved TMDLS. This Order requires that the results of the water quality monitoring provide the feedback loop to evaluate the effectiveness of the BMPs and programs implemented in the watershed and demonstrate Permittees' progress towards compliance with the wasteload allocations. Other TMDLs planned during the next MS4 Permit term include Big Bear Lake Nutrient TMDL (for all weather conditions), Big Bear Lake Mercury TMDL, Big Bear Lake and Rathbone Creek Sediment TMDL, and Big Bear Lake Watershed Metals TMDLs. The Permittees, within the affected watersheds, are required to participate in the development and implementation of those TMDLS. This Order may be reopened to incorporate any TMDLs_that may_be adopted and approved during the permit term.

An audit of each of the Permittees' storm water management programs during the third-term permit indicated no clear nexus between the watershed protection principles specified in the MSWMP and the WQMP and the Permittees' General Plan or related documents such as Development Standards, Zoning Codes, Conditions of Approval, Project Development Guidance, etc. It appears that aspects of the existing procedures, Development Standards, Ordinances and Municipal Codes may be barriers to implementation of watershed protection principles, especially low impact development techniques. This Order requires the Permittees to review and revise the Permittees' General Plan, Comprehensive or Master Plan, Municipal Codes, Subdivision Ordinances, Project Development Standards, Conditions of Approval or related documents to facilitate implementation of low impact development and other watershed protection principles.

The USEPA has recommended a shift to watershed-based NPDES permitting[29] and a watershed approach[30] to CWA programs, including NPDES programs. The Permittees

[29] EPA: Watershed-based NPDES permitting is a process that emphasizes addressing all stressors within a hydrologically-defined drainage basin, rather than addressing individual pollutant sources on a discharge-by-discharge basis.

[30] EPA (1996a): "The watershed approach is a coordinating framework for environmental management that focuses public and private sector efforts to address the highest priority problems within hydrologically defined geographic areas, taking into consideration both ground and surface water flow."

and the Regional Board also recognize that a watershed-based approach is expected to be effective in controlling pollutants in urban storm water runoff. Consistent with this approach, this Order requires the Permittees to develop, implement and monitor the effectiveness of a Watershed Action Plan that integrates hydromodification and water quality management strategies with land use planning policies, ordinances, and plans within each jurisdiction. A watershed approach considers the diverse pollutant sources and stressors and watershed goals within a defined geographic area (i.e., watershed boundaries) and it has three basic components: (1) *Geographic Focus*: Watersheds are nature's boundaries. They are the land areas that drain to surface waterbodies, and they generally include lakes, rivers, estuaries, wetlands, streams, and the surrounding landscape. Ground water recharge areas are also considered. (2) *Sound Management Techniques Based on Strong Science and Data*: Sound scientific data, tools, and techniques are critical to inform the process. Actions taken include characterizing priority watershed problems and solutions, developing and implementing action plans, and evaluating their effectiveness within the watershed. (3) *Partnerships/Stakeholder Involvement*: Watersheds transcend political, social, and economic boundaries. Therefore, it is important to involve all the affected interests in designing and implementing goals for the watershed. Watershed teams may include representatives from all levels of government, public interest groups, industry, academic institutions, private landowners, concerned citizens, and others.

To promote transparency and consistency within the permitted area, this Order requires each Permittee to develop its own local implementation plan (LIP) that specifies how each program element of the MSWMP and this Order will be implemented within its jurisdiction. The LIP shall specify the Permittee's legal authority and standard operating procedures including but not limited to its ordinances, plans, policies, procedures, personnel, tasks, schedules, checklists, educational materials, forms, maps of drainage areas, maps of wetlands or other environmentally sensitive areas, tools and resources utilized to implement the MSWMP requirements and requirements specified in this Order within its jurisdiction. The LIP shall identify the organizational units and personnel responsible for implementation of each program element, establish internal reporting requirements to ensure and promote accountability, and shall describe an adaptive method of evaluation and assessment of program effectiveness for the purpose of identifying program improvements.

The audits conducted by the Regional Board have also shown a need to improve program effectiveness assessment. This Order specifies quantifiable measures for evaluating program effectiveness.

The above-mentioned strategies for the fourth-term permit build upon and continue the programs and policies developed by the Permittees during the prior term permits as described in Sections VI and VII, above. A combination of these programs and policies and the requirements specified in this Order should improve control of pollutants in storm water runoff from storm water conveyance 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 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 (MEP) 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 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 permitting authority. Any requirements included in the Order that are more stringent than the federal storm water regulations is 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 2006 Report of Waste Discharge (ROWD) included a discussion of the current status of San Bernardino County's urban storm water management program and the proposed programs and policies for the next five years (fourth-term permit). A separate Municipal Storm Water Management Plan (MSWMP), submitted with the ROWD, defines the storm water programs and activities to be implemented during the fourth permit term and includes by reference a number of related documents such as the Water Quality Management Plan (WQMP). This Order incorporates these documents (2006 ROWD and MSWMP and other related documents).

This Order recognizes the significant progress made by the Permittees during the prior term permits in implementing various elements of the storm water program. This Order also recognizes regional and innovative solutions to such a complex problem, addresses deficiencies of the Permittees' storm water programs observed during the audits conducted by Regional Board staff, considers comments by the USEPA on other draft MS4 Permits and recommendations in the recently published report on Urban Storm Water Management by the National Research Council[31] (NRC) study. This Order specifies quantifiable performance measures to determine compliance and assess the effectiveness of the storm water programs. This Order incorporates an integrated watershed approach in solving water quality and hydromodification impacts resulting from urbanization and aims to promote low impact development techniques as a key element to mitigate impacts from new and redevelopment projects. The proposed permit also includes water quality based effluent limits based on wasteload allocations

[31] National Research Council Report (2008), http://www.nap.edu/catalog.php?record_id=12465

in approved TMDLs. The goal of these programs and policies that are included in this Order is to achieve and maintain water quality standards in the receiving waters.

The major requirements include: 1) Discharge prohibitions; 2) Effluent limitations and discharge specifications, including wasteload allocations for discharges to 303(d) listed waterbodies with adopted TMDLs and Permittees' De Minimus Discharges; 3) Receiving water limitations; 4) Legal authority and enforcement; 5) Prohibition on illicit connections and illegal discharges; 6) Control of sewage spills, sanitary sewer line leaks, septic system failures and portable toilet discharges; 7) Municipal inspection programs; 8) New development, including significant re-development requirements, including quantifiable measures for low impact development implementation and management of hydrologic conditions of concern and a time schedule to develop a watershed approach to address water quality and hydromodification issues; 9) public education and outreach; 10) Municipal facilities/activities; 11) Municipal construction projects; 12) Training program for storm water managers, planners, inspectors, and municipal contractors; and 13) 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, a separate Waste Discharge Requirement or coverage under the Regional Board's De Minimus permit will be required.

2. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS, INCLUDING WASTE LOAD ALLOCATIONS FOR DISCHARGES TO 303(D) LISTED WATERBODIES WITH ADOPTED TMDLS

This Order regulates the discharge of urban runoff as per 40 CFR122.26(d)(2)(iv)(B)(1). This Order also regulates de minimus types of discharges from Permittees' facilities and/or operations. The Regional Board regulates some of the "authorized discharges" under the de minimus permit. The Permittees' de minimus discharges are subject to maximum daily concentration limits consistent with the Regional Board's General De Minimus Permit for Discharges to Surface Waters, Order No. R8-2009-0003, NPDES No. CAG 998001. Permittees' de-minimus discharges covered under this Order include: 1) dewatering wastes from subterranean seepage, except for discharges from utility vaults; 2) discharges resulting from hydrostatic testing of vessels, pipelines, tanks, etc.; 3) discharges resulting from the maintenance of potable water supply pipelines, tanks, reservoirs, etc.; 4) discharges resulting from the disinfection of potable water supply pipelines, tanks, reservoirs, etc.; 5) discharges from potable water supply systems resulting from initial system startup, routine startup, sampling

of influent flow, system failures, pressure releases, etc.; 6) discharges from fire hydrant testing or flushing; 7) swimming pool discharges; 8) discharges resulting from diverted stream flows; and 9) Construction dewatering wastes. This Order specifies procedures for Regional Board notification of Permittees' de-minimus discharges.

NPDES regulations at 40 CFR 122.44(d)(vii)(B) require that NPDES permits be consistent with wasteload allocations approved by the USEPA. Wasteload allocations in adopted TMDLs for the Middle Santa River (MSAR) Watershed Bacterial Indicator, and the Big Bear Lake Nutrient TMDL for Dry Hydrological Conditions are included in this Order as Water Quality-Based Effluent Limitations (WQBELS). However, since the compliance dates of the adopted TMDLs are beyond the expected 5-year duration of this NPDES Permit, the Permittees are required to monitor and report effectiveness of the BMPs specified in the TMDL Implementation Plans and this Order with respect to pollutant reduction goal(s) as one measure of progress towards attainment of WLAs in accordance with the compliance schedules specified in the TMDL Implementation Plans. If water quality standards in the impaired receiving waters are met through implementation of appropriate control measures, the Basin Plan will be amended to revise the TMDLs.

3. RECEIVING WATER LIMITATIONS

Receiving water limitations are included to ensure that discharges from the 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 USEPA 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 USEPA requirements, as specified in State Board Order No. WQ 99-05. If water quality standards are not met through implementation of BMPs, the permittees are required to re-evaluate the programs and policies and propose more effective BMPs. Compliance determination will be based on this iterative BMP implementation/compliance evaluation process.

4. LEGAL AUTHORITY/ENFORCEMENT

The Permittees have adopted a number of ordinances, municipal codes, and other regulations to establish legal authority, control discharges to the MS4s and enforce these regulations as specified in 40 CFR 122.26(d)(2)(i)(A, 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)(B-D)).

The third-term permit required the Permittees to establish the authority and resources to administer either civil or criminal penalties and/or penalties for violations of their local water quality ordinances. Although a few Permittees have imposed monetary penalties for repeated violations of its ordinances, program evaluations conducted during the third-term permit showed that enforcement

activities undertaken by a majority of the Permittees have consisted primarily of Notices of Violation (NOVs) that are mostly to educate the public on the environmental consequences of illegal discharges. In some cases, multiple NOVs and stop work orders were issued to the same facilities for recurring violations without progressive enforcement. In the case of San Bernardino County, additional action has sometimes included recovery of investigative and cleanup costs from the responsible party. In case of egregious or criminal violations, the option exists for referral to the County District Attorney for possible prosecution. The fourth-term permit requires the Permittees to document and implement progressive and decisive enforcement actions, evaluate the effectiveness of their enforcement program and sanctions by tracking compliance and evaluating the amount of time to return to compliance. This Order also requires the Permittees to establish the authority to immediately abate discharges to its MS4s caused by unresponsive dischargers and recover its costs.

Since the 2006 ROWD identified bacteria as the highest priority pollutant for the permitted area, this Order requires the Permittees to promulgate ordinances that would specify control measures for known pathogen or bacterial sources, such as animal wastes, if those types of sources are present within their jurisdiction.

This Order requires the Permittees to include in the Local Implementation Plan (LIP) their legal authority and mechanisms to implement the various program elements required by this Order to properly manage, reduce and mitigate potential pollutant sources within each Permittee's jurisdiction. The LIP shall include citations of appropriate local ordinances, identification of departmental jurisdictions and key personnel in the implementation and enforcement of these ordinances. The LIP shall include procedures, tools and timeframes for progressive enforcement actions and procedures for tracking compliance.

5. ILLEGAL DISCHARGES / ILLICIT CONNECTIONS TO MS4s, LITTER DEBRIS AND TRASH CONTROL

Federal regulation, 40 CFR 122.26(d)(2(iv)(B), requires the Permittees to eliminate illicit discharges to the MS4s. During the second-term permit, the Permittees completed a 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. Program evaluations conducted during the third-term permit showed that this program element is primarily complaint driven or an incidental component of municipal inspections or conveyance system inspections.

This Order requires the Permittees to develop a plan for each jurisdiction to conduct focused, systematic field investigations, outfall reconnaissance survey, indicator monitoring, and track their sources[32]. A proactive illicit discharge

[32] 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.

detection and elimination (IDDE) program shall be integrated with other program elements including: GIS mapping of the Permittees' conveyance systems to track sources, aerial photography, municipal inspection programs for construction, industrial, commercial, storm drain systems, municipal facilities, etc., watershed monitoring, public education and outreach, pollution prevention, stream restoration efforts, and rapid assessment of stream corridors to identify dry weather flows and illegal dumping.

6. SEWAGE SPILLS, INFILTRATION INTO MS4 SYSTEMS, SANITARY SEWER LINE LEAKS, SEPTIC SYSTEM FAILURES AND PORTABLE TOILET DISCHARGES

Federal regulation, 40 CFR 122.26(d)(2)(iv)(B)(4), requires the Permittees to develop procedures to prevent, contain, and respond to spills that may discharge into the MS4s. The Permittees have already developed a program to address various types of spills to the MS4s. This Order requires the Permittees to continue to implement the unified sewer response plans in collaboration with the local sanitation districts. To facilitate swift response actions, the Permittees are required to provide 24-hour access to MS4s to the sanitation districts. The Permittees should also work cooperatively with the local sanitation districts to determine if exfiltration from leaking sanitary sewer lines is causing or contributing to urban storm water pollution problems. In addition, the Permittees are required to control infiltration or seepage from sanitary sewers to the MS4s through routine preventive maintenance of the storm drain system (40 CFR 122.26(d)(2)(iv)(B)(7)). This Order also requires the Permittees to implement control measures and procedures to prevent, respond to, contain and clean up all sewage and other spills from sources such as portable toilets and septic systems.

On May 2, 2006, the State Board issued the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (SSO Order) to address proper management and operation of sewer collection systems and to control sanitary sewer overflows. It requires dischargers/enrollees to develop and implement a written Sewer System Management Plan (SSMP) approved by the discharger's governing board and report sewer spills through an on-line reporting system. This Order requires the Permittees to coordinate the review of the unified sewage spill response plan developed during the third-term permit with the local sewering agencies to make it consistent with the requirements of the SSO Order. This Order also requires each Permittee to include in its LIP the interagency or interdepartmental sewer spill response coordination and responsibilities.

The MS4 program audits indicated that a majority of the Permittees with septic systems have inadequate information with regard to the number and location of systems within their jurisdiction. This Order requires the Permittees to develop an inventory of septic systems within its jurisdiction and establish a program to ensure that septic system failure rates are minimized.

7. MUNICIPAL INSPECTION PROGRAM

Federal regulations, 40 CFR 122.26(d)(2)(iv)(A-D), require the Permittees to inventory, prioritize and inspect industrial, construction and commercial facilities. The third-term permit required the Permittees to inventory construction, industrial and commercial facilities within their jurisdiction and to prioritize them for inspection based on threat to water quality. The permit specified the frequency at which high, medium, low priority sites are to be inspected. During the third-term permit, the Permittees proposed to develop a risk-based scoring system to prioritize facilities for inspections. Until approval of this risk-based prioritization system, the Permittees are required to continue the inspection program and prioritize facilities for inspection based on threat to water quality as specified in the third-term permit.

An evaluation of the municipal inspection programs during the third-term permit indicated certain deficiencies in the commercial, industrial and construction programs of some of the Permittees. In many instances, program documentation of progressive enforcement and facilities' return to compliance were not properly documented. This Order requires Permittees to document inspections and enforcement and evaluate the effectiveness of their inspection and enforcement program by tracking the time for facilities to return to compliance. During the third-term permit, most of the Permittees utilized the MS4 Solution Database to document their facility inventory, inspections and enforcement activities. This Order requires the Permittees to update the information in the MS4 Solution Database or use an equivalent web accessible database on a regular basis. The Permittees who do not have an internet accessible database shall initiate quarterly reporting and update of the inventory, inspection and enforcement database for facilities within their jurisdiction.

In order to address discharges to the MS4s from residential sources, the fourth-term permit requires the Permittees to develop and implement a residential program to prevent residential discharges from causing or contributing to a violation of water quality standards in the receiving waters (40 CFR 122.26(d)(2)(iv)(A)).

8. NEW DEVELOPMENT AND SIGNIFICANT REDEVELOPMENT

Federal regulation, 40 CFR 122.26(d)(2)(iv)(A)(2), requires the Permittees to develop a comprehensive master plan to address discharges from new and significant redevelopment projects. During the third-term permit, the Permittees revised their new development guidelines to address water quality and hydromodification impacts resulting from urbanization. A Water Quality Management Plan Guidance and Template was approved by the Regional Board in 2004 and amended in 2005. The Permittees were required to review and approve project-specific Water Quality Management Plans (WQMP) to address post-construction impacts. The WQMP should be designed to address water quality impacts, including hydrologic conditions of concern, from new and significant redevelopment projects through: (1) site design BMPs, including low impact development (LID) techniques; (2) source control BMPs; and (3) treatment control BMPs. This Order recognizes the importance of LID techniques to minimize the impact of urbanization on water quality. The fourth-term permit requires the project

proponents to infiltrate, harvest and reuse, evapotranspirate, or bio-treat the volume of runoff from a 24-hour, 85th percentile storm event where feasible. The Order also provides alternatives and in-lieu programs for project sites where infiltration, harvesting and re-use, evapotranspiration and bio-treatment are not feasible.

Program evaluations conducted during the third-term permit indicated a need for establishing a need for improved integration between the watershed protection principles, including LID techniques into the planning and approval processes of the Permittees. This Order requires the Permittees to review and revise their Development Standards, Zoning Codes, Conditions of Approval, Development Project Guidance, ordinances, and other related documents, where feasible, to identify and eliminate barriers to incorporate watershed protection principles.

The Southern California Monitoring Coalition (SMC), including project lead agency, the San Bernardino County Flood Control District, in collaboration with SMC members, 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, CASQA and the SMC. This manual will be incorporated into the CASQA BMP Handbooks. The Permittees are encouraged to utilize the manual as a resource for proper LID design and implementation techniques.

Program evaluations have also shown deficiencies in the Permittees' inspection, and tracking of post-construction BMPs. This Order requires the Permittees to revise their close-out procedures to include field verification that site design, source control and treatment control BMPs are operational and consistent with the approved WQMP.

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[33] 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, the Permittees are required to develop a standard design and post-development BMP guidance for streets, roads, highways, and freeway improvements that meet the performance standards for site design/LID BMPs, source control, treatment control as well as hydromodification control. 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 hydrologic conditions of concern from new development and significant redevelopment projects to minimize downstream impacts.

Consistent with a long term holistic approach to address water quality and hydromodification impacts resulting from urbanization, this Order requires Permittees to develop a Watershed Action Plan that integrates, to the extent

[33] National Research Council Report (2008), http://www.nap.edu/catalog.php?record_id=12465

practicable, water quality, stream protection, storm water management and re-use strategies with land use planning policies, ordinances, and plans within each jurisdiction. These plans should address cumulative impacts of development on vulnerable streams, preserve or restore, consistent with the maximum extent practicable standard, the structure and function of streams, and protect surface and groundwater quality. The Order specifies that the Watershed Action Plan include strategies for addressing (303(d) listed waterbodies with adopted TMDLs with or without implementation plans as well as those impaired water bodies without a TMDL. The Permittees are also required to participate in TMDL development and implementation.

9. PUBLIC AND BUSINESS EDUCATION AND OUTREACH PROGRAMS

Federal regulation, 40 CFR 122.26(d)(iv), requires the Permittees to develop a comprehensive storm water management plan with public participation and 40 CFR 122.26(d)(iv)(B)(6) requires the Permittees to engage in outreach activities to facilitate the proper management of pollutants. Public outreach is an important element of the overall urban pollution prevention program. The Permittees have implemented a strategic and comprehensive public education program to preserve and enhance the quality of receiving waters. The Principal Permittee has taken the lead role in the outreach programs and has targeted various groups including businesses, industry, commercial enterprises, developers, utilities, environmental groups, institutions, homeowners, school children, and the general public. The Permittees have developed a number of educational materials, have established a storm water pollution prevention hotline and website, 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 their public participation and education programs by participating in joint outreach programs with other agencies including, but not limited to, the SWQSTF, Caltrans, and other municipal storm water programs.

This Order also requires the Permittees to develop and distribute fact sheets/BMPs to address sources from residential sources such as: (1) auto washing and maintenance activities; (2) use and disposal of pesticides, herbicides, fertilizers and household cleaners; and (3) collection and disposal of pet wastes.

The Permittees are required to review their public education and outreach efforts and revise these activities, if necessary, to address public outreach needs.

Federal regulation, 40 CFR 122.26(d)(v), requires the Permittees to conduct a program assessment to determine the reduction in pollutant loadings due to urban storm water runoff management programs. Each Permittee is required to implement an assessment program, guided by the CASQA Program Effectiveness Guidance manual or equivalent alternative.

10. MUNICIPAL FACILITIES AND ACTIVITIES

Federal regulation, 40 CFR 122.26(d)(iv)(A), requires the Permittees to ensure that public agency activities and facilities do not cause or contribute to violations

of water quality standards in receiving waters. The third-term permit incorporated performance commitments in the ROWD to prevent public agency facilities and activities from causing or contributing to a pollution or nuisance in receiving waters. The Permittees were also required to develop and distribute BMP fact sheets for various public agency activities. The third-term permit also specified minimum requirements for street sweeping and inspection and maintenance of drainage facilities. Permittee as well as contract staff that perform public agency activities were required to be properly trained.

Program evaluations conducted during the third-term permit indicated varying degrees of compliance at public agency facilities and activities. This Order requires each Permittee to inventory and inspect its fixed facilities, field operations and drainage facilities to ensure that public agency facilities do not cause or contribute to a pollution or nuisance in receiving waters.

Fixed public facilities and field operations include, but are not limited to, public streets and roads, parking facilities, fire training facilities, flood management and conveyance systems, POTWs, solid waste transfer facilities, land application sites, corporate yards, maintenance and storage yards, household hazardous waste collection facilities, municipal airfields, recreational facilities, and special event or festival venues. The Permittees are required to include in their local implementation plan procedures and schedules for inspections and maintenance of public agency facilities and activities.

11. MUNICIPAL CONSTRUCTION PROJECTS

The third-term permit authorized the discharge of storm water from construction activities on one acre or more that are under ownership or direct responsibility of the Permittees. The Permittees were required to notify the Executive Officer prior to commencement of construction activities, and to comply with the substantive requirements of the latest Statewide General Construction Activities Storm Water Permit.

Program evaluations conducted during the third-term permit indicated that some of the Permittees were not submitting or were not aware of the requirement to submit a Notice of Construction or Permit Registration Documents (PRDs) and a Notice of Completion for municipal construction projects.

This Order continues the requirement of the third-term permit and builds upon it by requiring Permittees to include post-construction BMP information for municipal projects along with the Notice of Termination submitted to the Executive Officer upon completion of the construction activity. The Notice of Termination must include photographs of the completed project, a location map, structural post-construction BMP location, field verification report and long term operation and maintenance responsibility. The Permittees are required to develop a database of post-construction BMPs for which the Permittees are responsible and shall reference this database in the local implementation plans.

Emergency public work 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.

12. TRAINING PROGRAM FOR STORM WATER MANAGERS, PLANNERS, INSPECTORS, AND MUNICIPAL CONTRACTORS

Education of municipal planning, inspection, and maintenance staff is critical to ensure that land use decisions, local permit approvals and municipal facilities and activities do not cause or contribute to an exceedance of receiving water quality standards. During the third-term permit, the Permittees developed a web-based training program to provide better access to specific training elements. The Municipal Activities Pollution Prevention Strategy (MAPPS) online-training program addressed BMPs for public agency facilities and activities.

This Order requires the Permittees to define the necessary expertise and competencies for various job functions involved in the implementation of the areawide and local storm water programs and to develop an appropriate curriculum. The Permittees are required to conduct the training program for field operations and municipal inspection staff, for storm water managers, and for those involved in the review and approval of WQMPs and CEQA documents. The training curriculum should address the need for interdepartmental collaboration and communication to address issues related to storm water pollution controls.

13. MONITORING AND REPORTING REQUIREMENTS

Prior monitoring programs conducted by the Permittees consisted of drainage area characterization, BMP evaluation, storm water, and receiving water monitoring. These early programs focused on identifying pollutants, estimating pollutant loads, tracking compliance with water quality objectives, and identifying sources of pollutants. The San Bernardino County monitoring program, as well as other monitoring programs nationwide, has shown 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 are a number of pollutants in urban storm water runoff. A definite link between pollutants in urban runoff and beneficial use impairments has been established at least in a few studies.

To date, wet weather monitoring has shown elevated pollutant concentrations at monitoring Sites 2, 3 and 5. Monitoring Site 2 is located 400 feet south of Freeway 60, west of Archibald Avenue, on the east side of Cucamonga Creek Channel, in the City of Ontario. Land use within this drainage area is primarily commercial and industrial. Site No. 3 is located at Hellman Avenue, between Pine Avenue/Schleisman Road and Chino-Corona Road/Chandler Street, 75 feet east of Hellman Avenue bridge on the south side of Cucamonga Creek Channel

near the City of Chino on the San Bernardino County/Riverside County line. This site is mainly agricultural. Site No. 5 is located in the Hunts Lane access road north of Hospitality Lane, within a manhole located in the asphalt parking lot behind a group of commercial facilities in the City of San Bernardino. This site receives flows from predominantly restaurants and other businesses in the area. Using wet weather monitoring data from 1994-99, the 2000 ROWD identified Site 5 to have the highest average concentration for BOD, copper, zinc, and TSS while Site 3 has the highest average concentrations for nitrate and phosphorus. First flush data from the 1999-2000 monitoring events showed elevated levels consistent with prior years' data for Sites 2, 3, and 5. During the third-term permit, a Pollutant Source Investigation and Control Plan[34] was developed and implemented to investigate elevated pollutant concentrations of coliform bacteria, zinc, copper and lead at Site 5. This Order requires continued implementation of the plan, including annual reporting and BMP effectiveness evaluation for the Site 5 drainage area. This Order also requires the Permittees to continue first flush monitoring at storm drain monitoring Sites 2, and 3 to refine source identification and control techniques. Some of these efforts may be blended into the Watershed Action Plan that is required under the proposed Order.

The Order also requires the Permittees to participate in monitoring programs to support TMDL development and implementation. The Permittees are also participating in several other monitoring-related activities, including Comparative Evaluation of Microbial Source Tracking Techniques, Model Monitoring Program Guidance, Peak Flow Study, and Laboratory Inter-Calibration. Under the auspices of the Storm Water Monitoring Coalition, Southern California Coastal Water Research Project prepared "Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California", August 2004 Technical Report No. 419. This report noted, ".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 coalition consists of representatives from the Counties of Ventura, Los Angeles, Long Beach, Orange, San Bernardino, Riverside, and San Diego. An integrated Watershed Monitoring Plan should address any shortcomings in the overall monitoring programs and avoid duplicative efforts within the same watershed.

This Order requires the Permittees to continue their participation in these watershed coordination efforts. The third-term permit required the Permittees to initiate bioassessement monitoring. To allow for a holistic approach, this Order requires the Permittees to participate in the Regional Integrated Freshwater Bioassessment Monitoring Program in lieu of a separate bioassessment monitoring program for the permitted area.

This Order requires the Permittees to re-evaluate their Water Quality Monitoring Plan and submit a revised plan for approval. The revised integrated watershed monitoring program should integrate the goals and objectives of the Watershed Action Plan and rectify data gaps from previous monitoring efforts.

[34] 2005-2006, 2006-2007, 2007-2008 Annual Reports

X. WATER QUALITY BENEFITS/COST ANALYSIS/FISCAL ANALYSIS

There are direct and indirect benefits from clean beaches, clean water, and 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 2008, more than 2/3 of the U.S. waters meet these criteria. In the November 1999 "*Money"* magazine survey of the "Best Places to Live," clean water and air ranked as two of the most important factors in choosing a place to live. Thus, environmental quality has a definite link to property values. Clean lakes and beaches and other water recreational facilities also attract tourists.

The true magnitude of the urban runoff problem is still elusive and any cost estimate for cleaning-up urban runoff would be premature short of end-of-pipe treatments. 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 are included in the annual reports.

The area-wide program is funded by the Permittees. The Principal Permittee prepares an annual budget for the Management Committee. The Principal Permittee allocates 95 percent of the approved budget costs to the co-permittees based on percentage calculated using the cost allocation formula defined in the Implementation Agreement.

The costs incurred by the Permittees in implementing these programs and policies can be divided into two broad categories (the costs indicated below are for the entire San Bernardino 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 California Storm Water Quality Association, 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; training seminars, water quality monitoring, and Countywide pubic education and outreach. Actual area-wide storm water program expenditures have increased from $571,000 for FY 1995-96 (2nd term) to $1,593,000 in FY 2006-07 (3rd term). During the third-term permit there has been an increase of about 15%/year from 2002-2007 in these program expenses. The Storm Water Program had allocated a budget of $1,735,500 for FY 2007-08 and proposed a budget of $1,765,500 for FY 2008-2009[35]. Below is a breakdown of the expenditure items and the corresponding percentage weight in the total budget.

The permittees identified the following budget for Fiscal Year (2008-2009):

[35] San Bernardino County Storm water Program, Annual Report for Reporting Year (Fiscal Year) July 2007-June 2008, Nov 2008.

EXPENDITURE ITEMS	AMOUNT ($)	PERCENTAGE
Public Education Program	300,000	18.69
Big Bear Lake TMDL	250,000	15.58
Administration	170,000	10.59
Chino Basin TMDL Implementation (Middle Santa Ana River)	160,000	9.97
MS4 Database Development	150,000	9.35
Storm Water Quality Standards Study (SAWPA)-Phase 3	150,000	9.35
Monitoring Program	100,000	6.23
Training	100,000	6.23
Participation in Regional Monitoring Program (SCCWRP)	70,000	4.36
Annual Report Preparation	50,000	3.12
Consultant Costs	30,000	1.87
Participation in Statewide Storm Water Issues (CASQA)	30,000	1.87
HCOC Map and Documentation	25,000	1.56
Permit Renewal Tasks	20,000	1.25
Subtotal	**1,605,000**	
Approved Reserved Fund (2008-09)	160,500	
Total Budget	1,765,500	

2. Individual Costs for ROWD/MSWMP Implementation for the third-term permit: These are costs incurred by each Permittee for implementing programs that complement the NPDES program by reducing the potential for pollutants to enter the storm drain system. Most of these programs existed prior to the MS4 program and these include: (1) street sweeping; (2) hazardous waste collection and recycling; and (3) storm drain and other municipal facilities maintenance. The MSWMP required additional programs and policies to ensure that these activities were not a significant contributor of pollutants to the MS4s and the receiving waters. In 2006/07, the Permittees determined their total Individual Costs for these programs to be $60.138 million.

Funding sources for the Storm Water Program for individual permittees are General Funds, capital funds, storm drain fees, sewer funds, storm water management fees,

development fees, licensing fees, plan check fees, NPDES construction inspection fees, business license fees, gas tax, utility tax, solid waste funds, and others.

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 the 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, thereby improving protection for the beneficial uses of waters of the United States. 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. ANTI-BACKSLIDING

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations of 40 CFR 122.44(*l*) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order. Therefore this Order conforms with the anti-backsliding requirements of the CWA.

XIII. PUBLIC WORKSHOPS

The Regional Board conducted a public workshop on the first draft of the Order on August 3, 2009 at the Loma Linda City Council Chambers.

XIV. PUBLIC HEARING

The Regional Board will hold a public hearing (scheduled to start at 9:00 a,m,) regarding the proposed waste discharge requirements on January 29, 2010 at the City Council Chambers, City of Loma Linda, 25541 Barton Road, Loma Linda, CA. A Notice of Public Hearing was published in the Legal Notices section of The Sun, a local newspaper, on November 13, 2009. Further information regarding the conduct and nature of the public hearing concerning these waste discharge requirements may be obtained by writing or visiting the Santa Ana Regional Board office, 3737 Main Street, Suite 500, Riverside, CA 92501-3348. This and other information are also available at the website at: www.waterboards.ca.gov/santaana. A Notice of Public Hearing and Hearing Procedure is also posted on the Regional Board's website at:

http://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/san_bernardino_permit.shtml.

XV. INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Maria Macario at (951) 321-4583 or email at mmacario@waterboards.ca.gov. 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).

XVI. REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group of applications may leave his/her name, address, and phone number as part of the file for an application. Copies of the final waste discharge requirements will be emailed to all interested parties.

E-mail registration:

http://www.waterboards.ca.gov/resources/email_subscriptions/reg8_subscribe.shtml

In addition to the permittees, comments were solicited from the following agencies and/or persons:

Government Agencies

U. S. Environmental Protection Agency – John Kemmerer/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
U.S. Department of Agriculture - Forest Services, San Bernardino County National Forest
California Department of Transportation (Cal Trans), District 8, Paul Lambert
California Department of Parks and Recreation - Chino Hills State Park
Inland Valley Development Agency, San Bernardino International Trade Center and Airport
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) - Executive Officer
California Regional Water Quality Control Board, Central Valley Region (5S) - Executive Officer
California Regional Water Quality Control Board, Central Valley Region (5R) – Assistant Executive Officer

California Regional Water Quality Control Board, Central Valley Region (5F) – Assistant Executive Officer
California Regional Water Quality Control Board, Lahontan Region (6SLT) - Executive Officer
California Regional Water Quality Control Board, Lahontan Region (6V) – Assistant Executive Officer
California Regional Water Quality Control Board, Colorado River Basin Region (7) - Executive Officer
California Regional Water Quality Control Board, San Diego Region (9) - Executive Officer
California Department of Fish and Game - Ontario
California Department of Public Health – San Bernardino
California Department of Parks and Recreation - Perris
South Coast Air Quality Management District - Diamond Bar
Riverside County Flood Control District – Jason Uhley
Orange County Public Works Department - Chris Crompton/Richard Boone

Interested Parties

AEI/CASC – Jeff Endicott
URS/Greiner - Bob Collacott
Building Industry Association –Mark Grey
Latham & Watkins – Paul Singarella/Shirin Zandipour
Best, Best, and Krieger
Southern California Association of Governments (SCAG), Los Angeles
San Bernardino Associated Governments (SANBAG)
Santa Ana Watershed Project Authority - Celeste Cantu
Inland Empire West Resource Conservation District - General Manager

Universities and Colleges (Chancellor)

California State University - California State University San Bernardino
San Bernardino Community College District - Chaffey College Campus
San Bernardino Community College District - Crafton Hills College Campus
San Bernardino Community College District - San Bernardino Valley College Campus
University of Redlands
Loma Linda University

School Districts (Superintendent)

Alta Loma Elementary School District
Bear Valley Unified School District
Central Elementary School District
Chaffey Joint Union High School District
Chino Valley Unified School District
Colton Joint Unified School District
Cucamonga Elementary School District
Etiwanda Elementary School District

Fontana Unified School District
Mountain View Elementary School District
Mt. Baldy joint Elementary School District
Ontario-Montclair Elementary School District
Rialto Unified School District
Rim of the World Unified School District
Redlands Unified School District
San Bernardino City Unified School District
Upland Unified School District
Yucaipa Joint Unified School District

Hospitals (Administrator)

Bear Valley Community Hospital
Chino Community Hospital
Doctors Hospital
Kaiser Foundation Hospital
Loma Linda Community Hospital
Loma Linda University Medical Center
Mountains Community Hospital
Ontario Community Hospital
Patton State Hospital
Redlands Community Hospital
St. Bernardine Medical Center
San Antonio Community Hospital
San Bernardino Community Hospital
San Bernardino County Hospital

Environmental Organizations

Lawyers for Clean Water – Daniel Cooper
Orange County Coastkeeper – Garry Brown
Inland Empire Waterkeeper - Autumn DeWoody
Defend the Bay – Bob Caustin
Sierra Club, San Gorgonio Chapter
Natural Resources Defense Council (NRDC) – David Beckman/Bart Lounsbury
Cousteau Society
Audubon Sea & Sage Chapter

Newspapers

Press Enterprise
Inland Valley Daily Bulletin
Big Bear Grizzly
Chino-Chino Hills Champion Newspapers
Fontana Herald News
Highland Community News
Redlands Daily Facts
San Bernardino Sun
Los Angeles Times

Orange County Register

Railroads

AT&SF Railway Company
Union Pacific Railroad Company
BNSF Railway Company

Water Districts (General Manager)

Big Bear Municipal Water District
Inland Empire Utilities Agency
Cucamonga Valley Water District
East Valley Water District
Monte Vista Water District
San Bernardino Valley Municipal Water District
West San Bernardino County Water District
Yucaipa Valley Water District Orange County Water District
Metropolitan Water District
Western Municipal Water District
Orange County Water District

CALIFORNIA REGIONAL WATER QUALITY CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – SANTA ANA REGION

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF THE SAN BERNARDINO COUNTY MUNICIPAL STORMWATER PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

ORDER No. R8-2010-0036 (NPDES No. CAS618036)

MARK ONLY ONE ITEM 1. ☐ New Construction / Reconstruction 2. ☐ Change of Information for WDID# _____

I. OWNER

Name	Contact Person		
Mailing Address	Title		
City	State	Zip	Phone ( ) – Fax ( ) – Email :

II. CONTRACTOR INFORMATION

Name	Contact Person		
Local Mailing Address	Title		
City	State	Zip	Phone ( ) – Fax ( ) – Email:

III. SITE INFORMATION

A. Project Title	Site Address		
City	State	Zip	Contact Person Phone ( ) –
B. Construction commencement date: (Month / Day / Year)	C. Projected construction completion date: (Month / Day / Year)		

D. Type of Work: ☐ Utility ☐ Flood Control ☐ Transportation ☐ Other (Specify) Description of Work: _____	E. Total size of project/construction site: ____Acres Total size of area to be disturbed: ____Acres.

IV. RECEIVING WATER INFORMATION

A. Does the storm water runoff from the construction site discharge to (Check all that apply):
1. ☐ Indirectly to waters of the U.S.
2. ☐ Storm drain system - Enter owner's name:_____
3. ☐ Directly to waters of U.S. (e.g. , river, lake, creek, stream, or to a pipe/channel that flows without inflow from other sources between site and water body etc.)

V. IMPLEMENTATION OF NPDES PERMIT REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (mark one) ☐ A SWPPP has been prepared for this facility and is available for review ☐ A SWPPP will be prepared and ready for review by (date): ___/___/___ B. Date WQMP approved by local agency: ___/___/___ ☐ Not Applicable.	C. MONITORING PROGRAM (MP) (mark one) ☐ A MP has been prepared for this facility and is available for review ☐ A MP will be prepared and ready for review by (date): ___/___/___

VI. CERTIFICATIONS

"I certify under penalty of law that this document and all attachments were prepared under my direction and 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 or imprisonment. In addition, I certify that the Provisions of Section No. XIV of Order No. R8-2010-0036, including the development and implementation of a WQMP, a Storm Water Pollution Prevention Plan (SWPPP) and a Monitoring Program (MP), will be complied with."

Printed Name: _____ **Title:** _____

Signature: _____ **Date:** _____

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – SANTA ANA REGION

NOTICE OF TERMINATION

OF COVERAGE UNDER THE SAN BERNARDINO COUNTY MUNICIPAL STORMWATER PERMIT
FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY

ORDER No. R8-2010-0036 (NPDES No. CAS618036)

I. WDID No. _____

II. OWNER

Name	Contact Person		
Mailing Address	Title		
City	State	Zip	Phone ( ) – Fax ( ) – Email:

III. SITE INFORMATION

A. Original Project Title	Site Address		
City/Unincorporated Area	State CA	Zip	Site Contact Person
B. Contractor Name	Phone ( ) – Fax ( ) – Email:		Title
Local Mailing Address	City	State	Zip
Qualified SWPPP Practitioner	Phone ( ) – Fax ( ) – Email:		

IV. BASIS OF TERMINATION

__ 1. The construction project is completed and the following conditions have been met.

- ☐ All elements of the Storm Water Pollution Prevention Plan have been completed.
- ☐ Construction materials and waste have been disposed of properly.
- ☐ The site is in compliance with all local storm water management requirements.
- ☐ A post-construction storm water operation and management plan is in place (Attach a description of the post construction BMPs, the location (Latitude /Longitude), and a map of the locations of the PCBMPs).
- ☐ Field Verification Inspection (include a copy of the report) performed on ___/___/___ by Name_____

__ 2. Construction activities have been suspended; either temporarily ____ or indefinitely ___ and the following conditions have been met.

- ☐ All elements of the Storm Water Pollution Prevention Plan have been completed.
- ☐ Construction materials and waste have been disposed of properly.
- ☐ An effective combination of erosion and sediment control is in place for all denuded areas and other areas of potential erosion.
- ☐ The site is in compliance with all local storm water management requirements.

Date of suspension ____ / ____ / ____ Expected start up date ____ / ____ / ____

IV. CERTIFICATION

I certify under penalty of law that all storm water discharges associated with construction activity from the identified site that are authorized by NPDES General Permit No. CAS000002 have been eliminated or that I am no longer the owner of the site. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge storm water associated with construction activity under the General Permit, and that discharging pollutants in storm water associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this Notice of Termination does not release an owner of liability for any violation of the General Permit or the Clean Water Act.

Printed Name: _____ **Title:** _____

Signature: _____ **Date:** _____

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION
NOTICE OF INTENT
TO COMPLY WITH THE TERMS AND CONDITIONS OF THE

☐ **Riverside County MS4 Permit**
ORDER NO. R8-2010-0033
NPDES NO. CAS 618033

☐ **San Bernardino County MS4 Permit**
ORDER NO.R8-2010-0036
NPDES NO. CAS618036

GENERAL WASTE DISCHARGE REQUIREMENTS FOR DISCHARGE TO SURFACE WATERS THAT POSE INSIGNIFICANT (DE MINIMUS) THREAT TO WATER QUALITY

I. PERMITTEE (*Person/Agency Responsible for the Discharge*)
Agency/Company
Name:_____
Address/*Street* _____
City _____State _____ZIP_____Contact Person:_____
Phone: (_____)_____; Email: _____

II. FACILITY
Name:_____
Address/Street _____
City _____State _____ZIP_____Contact Person:_____
Phone: (_____)_____; Email: _____

a. Projected Flow Rate (gpd):_____,
b. Receiving Water (identify):_____

III. INDICATE EXISTING PERMIT NUMBER: (*if applicable*)
a. Individual Permit Order No. _____ NPDES No. _____
b. General Permit Order No. R8-2009-0003-_____
c. Others (specify) _____

IV. CERTIFICATION:

I certify under penalty of law that I am an authorized representative of the permittee and that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the permittee will comply with the terms and conditions stipulated in Orders No. R8-2009-0003 and (R8-2010-0033 or R8-2010-0036, as applicable) including the monitoring and reporting program issued by the Executive Officer of the Regional Board.

Name:_____Title:_____
(type or print)

Signature: _____ Date: _____

Email: _____

Remarks: If changes to facility ownership and/or treatment processes were made after the issuance of the existing permit, please provide a description of such changes on another sheet and submit it with this Notice of Intent.

V. OTHER REQUIRED INFORMATION - FOR NEW DISCHARGERS AND FOR NEW DISCHARGES AND LOCATIONS NOT PREVIOUSLY REPORTED BY EXISTING DISCHARGERS.

Please provide a COMPLETE characterization of your discharge. A complete characterization includes, but is not limited to:

a. A list of constituents and the discharge concentration of each constituent;

b. The estimated average and maximum daily flow rates at unit of gallons per day(gpd); the frequency and duration of the discharge and the date(s) when discharge will start;

c. The proposed discharge location(s) as latitude and longitude for each discharge point;

d. A description of the proposed treatment system (if appropriate);

e. The affected receiving water; the receiving water(s) shall be
   1) receiving storm drain/creek, and/or
   2) the ultimate receiving water, such as Santa Ana River, San Jacinto River, Lake Elsinore, Prado Park Lake, etc.;

f. A map showing the path from the point of initial discharge to the ultimate receiving water. Please try to limit your maps to size of 8.5” X 11”.

g. A list of known or suspected leaking underground tanks and other facilities or operations that have, or may have impacted the quality of the underlying groundwater within 200 feet of the site property lines for projects with expected discharge flow rates of less than 100,000 gallons per day and within 500 feet of the site property lines for projects with expected discharge flow rates of greater than 100,000 gallons per day.

h. Any other information deemed necessary by the Executive Officer.

VI. OTHER

Attach additional sheets to explain any responses which need clarification. List attachments with titles and dates below:

You will be notified by a representative of the RWQCB within 30 days of receipt of your application. The notice will state if your application is complete or if there is additional information you must submit to complete your application, pursuant to Division 7, Section 13260 of the California Water Code.

June 2, 2017

Jeff Mathieu
City Manager
City of Big Bear Lake
P.O. Box 10000
Big Bear Lake, CA 92315

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Mathieu,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Konradt Bartlam
City Manager
City of Chino Hills
14000 City Center Drive
Chino Hills, CA 91709

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Bartlam,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Matthew Ballantyne
City Manager
City of Chino
13220 Central Avenue
Chino, CA 91710

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Ballantyne,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Bill Smith
City Manager
City of Colton
650 North La Cadena Drive
Colton, CA 92324

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Smith,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

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Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

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Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Gerry Newcombe
Director
County of San Bernardino Flood Control District
825 East Third Street
San Bernardino, CA 92415-0835

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Newcombe,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Dena M. Smith
Interim CEO
County of San Bernardino
385 North Arrowhead Avenue, 5th Floor
San Bernardino, CA 92415-0835

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Ms. Smith,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Ken Hunt
City Manager
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Hunt,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
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Citations

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Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Harold Duffrey
City Manager
City of Grand Terrace
22795 Barton Road
Grand Terrace, CA 92313

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Duffrey,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Joe Hughes
City Manager
City of Highland
27215 East Base Line
Highland, CA 92346

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Hughes,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

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[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

T. Jarb Thaipejr
City Manager
City of Loma Linda
25541 Barton Road
Loma Linda, CA 92354

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Thaipejr,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

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1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Edward C. Starr
City Manager
City of Montclair
P.O. Box 2308
Montclair, CA 91763

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Starr,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Al C. Boling
City Manager
City of Ontario
303 East B Street
Ontario, CA 921764

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Boling,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

John Gillison
City Manager
City of Rancho Cucamonga
10500 Civic Center Drive
Rancho Cucamonga, CA 91730

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Gillison,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Nabar Enrique Martinez
City Manager
City of Redlands
P.O. Box 3005
Redlands, CA 92373

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Martinez,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Mike Story
Administrator
City of Rialto
150 South Palm Avenue
Rialto, CA 92376

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Story,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Mark Scott
City Manager
City of San Bernardino
300 North "D" Street, 4th Floor
San Bernardino, CA 92418

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Scott,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

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Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Martin Thouvenell
Interim City Manager
City of Upland
P.O. Box 460
Upland, CA 91785

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Thouvenell,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

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a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
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[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

June 2, 2017

Ray Casey
City Manager
City of Yucaipa
34272 Yucaipa Boulevard
Yucaipa, CA 92399

WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; REQUIREMENTS FOR PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) CO-PERMITTEES WITHIN THE JURISDICTION OF THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Dear Mr. Casey,

The Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) is charged with the protection of beneficial uses of surface water in parts of Orange, Riverside, and San Bernardino counties. On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions[1] to address the impacts trash has on the beneficial uses of surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through municipal separate storm sewer system (MS4) discharges. Within the jurisdiction of the Santa Ana Regional Board, these discharges from San Bernardino County's Phase I MS4s are regulated through the San Bernardino County MS4 Permit (Order No. R8-2010-0036 NPDES No. CAS618036) pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions establish a statewide water quality objective for trash and a prohibition of trash discharge, or deposition where it may be discharged, to surface waters of the State. For Phase I Co-permittees that have regulatory authority over Priority Land Uses,[2] the Trash Provisions require implementation of the prohibition through requirements incorporated into Phase I MS4 Permits and/or through monitoring and

[1] Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Ocean Plan) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, And Estuaries Of California (ISWEBE Plan) to be adopted by the State Water Board. Documents may be downloaded from our website at http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

[2] Defined in Enclosure, *Trash Provision Glossary*.

reporting orders, by **June 2, 2017**.[3] Since the Trash Provisions have not yet been implemented through the San Bernardino County MS4 Permit, the Santa Ana Regional Board is implementing the initial steps of the Trash Provisions through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions[4] and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h). The implementation plans that are submitted in response to this Order are subject to approval by the Executive Officer.

The Trash Provisions require Phase I Co-permittees that have regulatory authority over Priority Land Uses to select either Track 1 or Track 2 as a method of compliance with the trash prohibition. Each method is summarized below. Through this Order, the Santa Ana Regional Board requires each Co-permittee to determine and report their selection: [5]

1. Track 1: Install, operate, and maintain Full Capture Systems[6] for all storm drains that capture runoff from the Priority Land Uses in their jurisdictions; or

2. Track 2: Install, operate, and maintain any combination of Full Capture Systems, Multi-Benefit Projects[7], other Treatment Controls[7], and/or Institutional Controls[7] within either the jurisdiction of the Co-permittee or within the jurisdiction of the Co-permittee and contiguous MS4 permittees. The Co-permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The Co-permittee shall demonstrate that such combination achieves Full Capture System Equivalency[7]. The Co-permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency. It is, however, the State Water Board's expectation that the Co-permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

To ensure that each Co-permittee's selection is completed accurately, the Santa Ana Regional Board recommends each Co-permittee develop maps identifying Priority Land Use areas within their jurisdiction, the corresponding storm drain network and associated drainage areas, and proposed locations for certified Full Capture System installations. Co-permittees that select the Track 2 method are encouraged to identify on the maps the locations or land uses where a combination of controls, which are identified in Track 2 above, will be implemented to achieve Full Capture Systems Equivalency.

Co-permittees that select Track 1 may discover that there are locations where certified Full Capture Systems cannot be implemented, or are better implemented within another land use area. The Trash Provisions allow a Co-permittee to request substitution of one or more Priority Land Uses with alternate land uses within their jurisdiction.

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[3] If you believe that your agency is not subject to the Trash Provisions because your agency does not have regulatory authority over any Priority Land Use, please contact the Santa Ana Regional Board staff member identified below.

[4] Chapter IV.A.5.a(1)B of the ISWEBE and Chapter III.L.4.a(1)B of the Ocean Plan.

[5] Chapter IV.A.3.a of the ISWEBE Plan and Chapter III.L.2.a of the Ocean Plan.

[6] Defined in Enclosure, *Trash Provision Glossary*.

The Trash Provisions describe two examples of assessment approaches for Co-permittees to demonstrate Full Capture System Equivalency when they select the Track 2 compliance method. Co-permittees may use alternative methods to demonstrate Full Capture System Equivalency. One alternative method currently implemented in the San Francisco Bay region relies heavily on the use of on-land visual trash assessments. A description of the Visual Trash Assessment Approach[7] is enclosed in this Order and may be used by Co-permittees to meet the requirement for a baseline trash assessment.

Co-permittees choosing Track 2 may determine the locations or land uses within their jurisdictions to implement any combination of controls that achieve Full Capture System Equivalency. The plan to implement these controls is subject to approval by the Santa Ana Regional Board Executive Officer.[8]

This Order directs MS4 Co-permittees selecting Track 2 to first assess trash levels of Priority Land Uses. Co-permittees selecting Track 2 must, at a minimum, assess the Priority Land Use areas, even if they subsequently select other locations or land uses within their jurisdiction to implement any combination of controls that meet Full Capture System Equivalency. If proposing to select locations or land uses other than Priority Land Uses, the Co-permittees must assess trash levels at those locations or land uses and provide a justification demonstrating that the selected locations or land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

The Trash Provisions provide the Santa Ana Regional Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses.[9] In the event the Santa Ana Regional Board makes that determination, the Co-permittees will be required to comply with the requirements of the Trash Provisions with respect to such land uses or locations.

Although not yet incorporated into the San Bernardino County MS4 Permit, the Trash Provisions require that minimum Monitoring and Reporting requirements be implemented through an MS4 Permit. The Santa Ana Regional Board staff will recommend including monitoring and reporting requirements in the next iteration of the San Bernardino County MS4 Permit which are at least as stringent as those in the Trash Provisions below:

1. Co-permittees that elect to comply with Track 1 shall provide a report to the Santa Ana Regional Board demonstrating installation, operation, maintenance, and the Geographic Information System (GIS) mapped location and drainage area served by its Full Capture Systems on an annual basis.[10]

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[7] See Enclosure, *Recommended Trash Assessment Minimum Level of Effort.*

[8] Chapter IV.A.5.a.(1)B. of ISWEBE Plan or Chapter III.L.4.a.(1)B. of the Ocean Plan.

[9] Chapter IV.A.3.d. of ISWEBE Plan or Chapter III.L.2.d of the Ocean Plan.

[10] Chapter IV.A.6.a. of ISWEBE Plan or Chapter III.L.5.a. of the Ocean Plan.

2. Co-permittees that elect to comply with Track 2 shall develop and implement monitoring plans that demonstrate the effectiveness of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls and compliance with Full Capture System Equivalency[11]. Monitoring reports shall be provided to the Santa Ana Regional Board on an annual basis, and shall include GIS mapped locations and drainage area served for each of the Full Capture Systems, Multi-Benefit Projects, other Treatment Controls, and/or Institutional Controls installed or utilized by the Co-permittee. In developing the monitoring reports the Co-permittee should consider the following questions:

    a. What type of and how many Treatment Controls, Institutional Controls, and/or Multi-Benefit Projects have been used and in what locations?

    b. How many Full Capture Systems have been installed (if any), in what locations have they been installed, and what is the individual and cumulative area served by them?

    c. What is the effectiveness of the total combination of Treatment Controls, Institutional Controls, and Multi-Benefit Projects employed by the Co-permittee?

    d. Has the amount of Trash discharged from the MS4 decreased from the previous year? If so, by how much? If not, explain why.

    e. Has the amount of Trash in the MS4's receiving water(s) decreased from the previous year? If so, by how much? If not, explain why.

3. Co-permittees will be required to demonstrate achievement of interim milestones such as average load reductions of 10% per year or other progress to full implementation. Full compliance with the Trash Provisions shall occur within ten (10) years of the effective date of the first implementing permit except as specified in Chapter III.L.4.a.5 of Ocean Plan and Chapter IV.A.5.a.5 of the ISWEBE Plan.[12] In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Provisions (i.e. December 2, 2030).[13]

This Order is issued to implement federal law. The water quality objective established by the Trash Provisions serves as a water quality standard federally mandated under Clean Water Act section 303(c) and the federal regulations. (33 U.S.C. § 1312, 40 C.F.R. § 131.) This water quality standard was specifically approved by U.S. EPA following

[11] Chapter IV.A.6.b. of ISWEBE Plan or Chapter III.L.5.b. of the Ocean Plan.

[12] The exception provides that, where the permitting agency, such as the Santa Ana Regional Board, makes a determination that a specific land use generates a substantial amount of Trash, the permitting agency has discretion to determine the time schedule for full compliance. In no case may the final compliance date be later than ten (10) years from the determination.

[13] Chapter IV.A.5.a.(2) and (3) of ISWEBE Plan or Chapter III.L.4.a.(2) and (3) of the Ocean Plan.

adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for municipal permittees to plan for implementation of actions to achieve the water quality standard for trash. Further, the water quality standard expected to be achieved pursuant to the Trash Provisions may allow each water body impaired by trash and already on the Clean Water Act section 303(d) list to be removed from the list, or each water body subsequently determined to be impaired by trash to not be placed on the list, obviating the need for the development of a total maximum daily load (TMDL) for trash for each of those water bodies. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) In those cases, the specific actions that will be proposed by the municipal permittees in response to this Order substitute for some or all of the actions that would otherwise be required consistent with any waste load allocations in a trash TMDL. (40 C.F.R. § 122.44, subd. (d)(1)(vii)(B).) This Order nevertheless allows municipal permittees to select specific proposed actions to meet the federal requirements.

The implementation plan required by this Order in clause 2 below is subject to approval by the Santa Ana Regional Board's Executive Officer. A request for an equivalent alternative land use must be approved by the Santa Ana Regional Board's Executive Officer prior to installation and implementation of certified Full Capture Systems or Full Capture System Equivalency trash controls.

California Water Code Section 13383(a) states the following:

"The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge."

The reporting requirements of this Order are necessary to comply with the Trash Provisions in the ISWEBE Plan and the Ocean Plan. Pursuant to California Water Code section 13383, **it is hereby ordered** that the Co-permittee shall submit electronically the following items:

1. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

2. By **August 31, 2017**, submit electronically a letter to the Santa Ana Regional Board identifying the Co-permittee's selected method of compliance, (Track 1 or Track 2) as defined previously in this Order.

3. **Track 2 Permittees Only:** By **November 30, 2018** submit electronically to the Santa Ana Regional Board an implementation plan, subject to approval by the Executive Officer, that describes the following:

    a. The combination of controls selected and the rationale for the selection;

    b. How the combination of controls is designed to achieve Full Capture System Equivalency;

    c. How Full Capture System Equivalency will be demonstrated;

    d. If using a methodology other than the attached recommended Visual Trash Assessment Approach to determine trash levels, a description of the methodology used; and,

    e. If proposing to select locations or land uses other than Priority Land Uses, a justification demonstrating that the alternative land uses generate trash at rates that are equivalent to or greater than the Priority Land Uses.

4. Sign, certify, and submit all letters and the implementation plan with supporting documentation required by this Order electronically to santaana@waterboards.ca.gov.

5. Ensure that any person signing a letter, implementation plan and supporting documentation required by this Order makes 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."

The issuance of this Order is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15262, Chapter 3, Title 14 of the California Code of Regulations because this Order only requires feasibility or planning studies for possible future actions which the Santa Ana Regional Board has not approved, adopted, or funded. The Santa Ana Regional Board did consider environmental factors associated with this Order and finds that the actions required in this Order will ensure future protection of water quality and those associated beneficial uses the Santa Ana Regional Board is charged to protect.

Any person aggrieved by this action of the Santa Ana Regional Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found at the following webpage or will be provided upon request.: http://www.waterboards.ca.gov/public notices/petitions/water quality/index.shtml

Failure to comply with this Order, or falsifying any information provided therein, may result in enforcement action including civil liabilities for late or inadequate reports, consistent with Water Code section 13385.

Questions regarding this Order or any requests for assistance should be directed to Keith L. Elliott at (951) 782-4925 or keith.elliott@waterboards.ca.gov.

Sincerely,

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures (2): 1. Trash Provisions Glossary
2. State Water Resources Control Board Recommended Trash Assessment Minimum Level of Effort

cc: Co-permittee NPDES Coordinators by e-mail

This glossary is an excerpt of the Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, and the California Ocean Plan.

Full Capture System: A treatment control*, or series of treatment controls, including but not limited to, a multi-benefit project* or a low-impact development control* that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

a) of not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area, or
b) appropriately sized to, and designed to carry at least the same flows as, the corresponding storm drain.

[Rational equation is used to compute the peak flow rate: Q = C x I x A, where Q = design flow rate (cubic feet per second, cfs); C = runoff coefficient (dimensionless); I = design rainfall intensity (inches per hour, as determined per the rainfall isohyetal map specific to each region, and A = subdrainage area (acres).]

Prior to installation, full capture systems* must be certified by the Executive Director, or designee, of the State Water Board. Uncertified full capture systems will not satisfy the requirements of these Trash Provisions*. To request certification, a permittee shall submit a certification request letter that includes all relevant supporting documentation to the State Water Board's Executive Director. The Executive Director, or designee, shall issue a written determination approving or denying the certification of the proposed full capture system or conditions of approval, including a schedule to review and reconsider the certification. Full capture systems certified by the Los Angeles Regional Water Board prior to the effective date of these Trash Provisions and full capture systems listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014) will satisfy the requirements of these Trash Provisions, unless the Executive Director, or designee, of the State Water Board determines otherwise.

Full Capture System Equivalency: The trash* load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from the relevant areas of land (priority land uses*, significant trash generating areas*, facilities or sites regulated by NPDES permits for discharges of storm water* associated with industrial activity, or specific land uses or areas that generate substantial amounts of trash, as applicable). The full capture system equivalency* is a trash load reduction target that the permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority*. Examples of such approaches include, but are not limited to, the following:

(1) Trash Capture Rate Approach. Directly measure or otherwise determine the amount of trash captured by full capture systems for representative samples of all similar types of land uses, facilities, or areas within the relevant areas of land over time to identify specific

* Defined within this document.

trash capture rates. Apply each specific trash capture rate across all similar types of land uses, facilities, or areas to determine full capture system equivalency. Trash capture rates may be determined either through a pilot study or literature review. Full capture systems selected to evaluate trash capture rates may cover entire types of land uses, facilities, or areas, or a representative subset of types of land uses, facilities, or areas.

With this approach, full capture system equivalency is the sum of the products of each type of land use, facility, or area multiplied by trash capture rates for that type of land use, facility, or area.

(2) Reference Approach. Determine the amount of trash in a reference receiving water in a reference watershed where full capture systems have been installed for all storm drains that capture runoff from all relevant areas of land. The reference watershed must be comprised of similar types and extent of sources of trash and land uses (including priority land uses and all other land uses), facilities, or areas as the permittee's watershed. With this approach, full capture system equivalency would be demonstrated when the amount of trash in the receiving water is equivalent to the amount of trash in the reference receiving water.

Institutional Controls: Non-structural best management practices (i.e., no structures are involved) that may include, but not be limited to, street sweeping, sidewalk trash* bins, collection of the trash, anti-litter educational and outreach programs, producer take-back for packaging, and ordinances.

Low-Impact Development Controls: Treatment controls that employ natural and constructed features that reduce the rate of storm water runoff, filter out pollutants, facilitate storm water storage onsite, infiltrate storm water into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water. (See Water Code § 10564.)

Multi-Benefit Project: a treatment control* project designed to achieve any of the benefits set forth in section 10562, subdivision (d) of the Water Code. Examples include projects designed to: infiltrate, recharge, or store storm water for beneficial reuse; develop or enhance habitat and open space through storm water and non-storm water management; and/or reduce storm water and non-storm water runoff volume.

Municipal Separate Storm Sewer System (MS4): Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(8).

Preproduction Plastic: Same meaning set forth in section 13367(a) of the Water Code.

Priority Land Uses: Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 permittee's jurisdiction from which discharges of trash* are regulated by these Trash Provisions* as follows:

* Defined within this document.

(1) High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
(2) Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).
(3) Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.)
(4) Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
(5) Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Equivalent alternate land uses: An MS4 permittee with regulatory authority over priority land uses may issue a request to the applicable permitting authority* that the MS4 permittee be allowed to substitute one or more land uses identified above with alternate land uses within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use(s) being substituted. The land use area requested to substitute for a priority land use need not be an acre-for-acre substitution but may involve one or more priority land uses, or a fraction of a priority land use, or both, provided the total trash generated in the equivalent alternative land use is equivalent to or greater than the total trash generated from the priority land use(s) for which substitution is requested. Comparative trash generation rates shall be established through the reporting of quantification measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, such as the "Keep America Beautiful Visible Litter Survey"; or other information as required by the permitting authority.

Permitting Authority: The State Water Board or Regional Water Board, whichever issues the permit.

Significant Trash Generating Areas: All locations or facilities within the Department's jurisdiction where trash* accumulates in substantial amounts, such as:
(1) Highway on- and off-ramps in high density residential, commercial, and industrial land uses (as such land uses are defined under priority land uses* herein).
(2) Rest areas and park-and-rides.
(3) State highways in commercial and industrial land uses (as such land uses are defined under priority land uses herein).
(4) Mainline highway segments to be identified by the Department through pilot studies and/or surveys.

Storm Water: Same meaning set forth in 40 Code of Federal Regulations section 122.26(b)(13) (Nov. 16, 1990).

* Defined within this document.

Treatment Controls: Structural best management practices to either (a) remove pollutants and/or solids from storm water* runoff, wastewater, or effluent, or (b) capture, infiltrate or reuse storm water runoff, wastewater, or effluent treatment controls* include full capture systems* and low impact development controls*.

Trash: All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Trash Provisions: The water quality objective for trash*, as well as the prohibition of discharge and implementation requirements set forth in Implementation of Water Quality Objectives of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan.

* Defined within this document.

Recommended Trash Assessment Minimum Level of Effort for Establishing Baseline Trash Generation Levels

The following trash assessment minimum level of effort (TAMLE) is recommended by the State Water Resources Control Board (State Water Board) for establishing baseline trash generation levels in Priority Land Uses and/or other land uses and locations. The TAMLE is based on the findings of a recent Proposition 84 study (Tracking California's Trash) completed in 2016 that was funded by the State Water Board. The recommended TAMLE utilizes Tracking California's Trash On-land Visual Trash Assessment protocols to establish qualitative estimates of the amount of trash generated on street segments, sidewalks and adjacent land areas, and transported into the MS4. The complete protocol can be found here:

http://basmaa.org/Announcements/tracking-cas-trash-on-land-visual-assessments

The protocol has been extensively and successfully used by San Francisco Bay Area Phase I municipalities to establish baseline trash generation maps that serve as the starting point for demonstrating trash reductions into the MS4. Trash generation categories (A-Low, B-Moderate, C-High, and D-Very High) based on the levels of trash observed during assessments are assigned to adjacent land areas (e.g., priority land use areas), which are then illustrated on baseline trash generation maps. Each trash generation category has a corresponding trash generation rate that was established during the Bay Area Trash Generation Rate Study (BASMAA 2014) and confirmed during the recent Tracking California's Trash project (BASMAA 2016).

Equipment and Methods

The TAMLE methodology is relatively simple and inexpensive to use, but provides a level of precision needed to accurately depict baseline trash generation. The protocol requires a minimum of two field crew members, both for objectivity and safety, each trained in the use of the TAMLE protocol. Very limited equipment is needed (i.e., clipboard, pencils/pens, digital camera preferably with GPS capabilities, and field forms and maps). Bright clothing or safety vests are also recommended for field crew members.

MS4 permittees employ the following steps to establish baseline trash generation levels via TAMLEs:

1. Assemble equipment needed to conduct the assessment including the field form delineating the assessment area and review trash assessment category definitions presented in the protocol.[1]

2. Once at the Priority Land Use area and other selected land use or locations to be assessed (hereinafter referred to as Assessment Area), safely walk at a normal pace on the sidewalk adjacent to the Assessment Area observing the levels of trash present on the street, sidewalk, and adjacent land areas that could be transported to the MS4. In areas where no sidewalk is present, assessments may be conducted by slowly driving adjacent to the Assessment Area and observing trash on the street and sidewalk.[2]

3. Collectively agree on the appropriate trash generation category to assign the Assessment Area and document the category observed on field data sheets and/or maps. Crew members should take at least one photograph per Assessment Area to document that the site was visited and to document the level of trash present.

4. Assessment results should be transferred to trash generation maps to illustrate baseline trash generation levels in the Assessment Areas. Color-coding maps based on the trash levels observed (Green=Low, Yellow=Moderate, Red=High, and Purple=Very High) during TAMLEs.

Frequency and Timing of Assessments

To accurately establish baseline trash generation levels for the Assessment Area, a minimum of two TAMLEs should be conducted on streets and sidewalks associated with each Assessment Area (BASMAA 2016). To the extent possible, assessments should be conducted during both the dry (April-September) and wet (October- March) seasons. So that baseline trash generation levels are not under-predicted, assessments should be conducted at timeframes when the greatest level of trash has accumulated on streets and sidewalks (e.g. directly before street-sweeping events). Additionally, in order to reduce the influence of recent rainfall-runoff events that may have washed street trash into storm drains, TAMLEs should only be conducted if less than 0.5 inches of rainfall has occurred in a 24 hour period, 48 hours prior to the assessment.

[1] Trash generation rates are: Low (0 – 5 gallons/acre/year); Moderate (5-10 gallons/acre/year); High (10-15 gallons/acre/year); and Very High (50-150 gallons/acre/year).

[2] This technique should only be used when automobiles are not parked on the street, which can obstruct the view of trash.

Estimated Resources Needed to Establish Baseline Generation Levels via TAMLEs

The extent of the Assessment Areas within each MS4 permittee's jurisdiction will govern the level of effort needed to establish the baseline trash generation levels using TAMLEs. The more Assessment Areas within a city/county, the more time and resources will be needed to conduct assessments and map the results. The following examples are based on the experience of MS4s in the San Francisco Bay Area and are given to provide rough estimates of the time that an MS4 permittee (small or moderate sized city) would need to expend to establish baseline trash generation levels in Assessment Areas using the TAMLE approach.

Task	**Example #1** *Small-Sized Town/City (Pop = 12,500)*	**Example #2** *Moderate-Sized City (Pop = 50,000)*
Assumptions		
PLU Area (acres)	*150*	*1500*
Assessment Length per PLU Area (feet per acre)	*75*	*75*
Hrs for two staff to conduct 1,000 ft assessment (including travel time)	*0.5*	*0.5*
Frequency of Assessment in each PLU Area	*2*	*2*
Tasks	**Staff Hours**	**Staff Hours**
Preparation for Assessments	5	20
Conducting OVTAs (Two Staff Members)	11	113
Data Compilation/Management	3	20
Mapping Assessment Results	24	40
Total Estimated Staff Hours	**43**	**193**

Citations

Bay Area Stormwater Management Agencies Association (BASMAA). 2014. *San Francisco Bay Area Stormwater Trash Generation Rates*. Prepared by EOA, Inc. May.

Bay Area Stormwater Management Agencies Association (BASMAA). 2016. Evaluation of the On-land Visual Assessment Protocol as a Method to Establish Baseline Levels of Trash and Detect Improvements in Stormwater Quality.

Tracking California's Trash Project. State Water Resources Control Board Grant Agreement No. 12-420-550. Prepared by EOA, Inc.
December.

DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On January 31, 2020, I served the:

- **Administrative Record on Water Code Section 13383(a) Phase I MS4 Trash Order**

  Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Brea, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-07
  City of Brea, Claimant

  Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Cypress, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-08
  City of Cypress, Claimant

  Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Huntington Beach, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-09
  City of Huntington Beach, Claimant

  Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Newport Beach, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-10
  City of Newport Beach, Claimant

  Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Orange, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-11
  City of Orange, Claimant

  Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Seal Beach, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-12
  City of Seal Beach, Claimant

  Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Anaheim, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-13
  City of Anaheim, Claimant

  Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Chino Hills, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-14
  City of Chino Hills, Claimant

  Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Costa Mesa, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-15
  City of Costa Mesa, Claimant

  Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Garden Grove, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-16
  City of Garden Grove, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Laguna Woods, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-17
City of Laguna Woods, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Lake Forest, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-18
City of Lake Forest, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of San Jacinto, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-19
City of San Jacinto, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Santa Ana, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-20
City of Santa Ana, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Tustin, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-21
City of Tustin, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Villa Park, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-22
City of Villa Park, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Yorba Linda, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-23
City of Yorba Linda, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to County of Orange, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-24
County of Orange, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Grand Terrace, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-25
City of Grand Terrace, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Irvine, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-26
City of Irvine, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Placentia, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-27
City of Placentia, Claimant

Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Rialto, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017, 17-TC-28
City of Rialto, Claimant

By making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on January 31, 2020 at Sacramento, California.

Lorenzo Duran
Commission on State Mandates
980 Ninth Street, Suite 300
Sacramento, CA 95814
(916) 323-3562

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-07

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Brea, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Brea

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Bill Gallardo, City Manager, *City of Brea*
Claimant Contact
1 Civic Center Circle, Brea, CA 92821
Phone: (714) 990-7710
billga@cityofbrea.net

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Nicholas Ghirelli, Attorney, *Richards Watson Gershon*
355 South Grand Avenue, Suite 4000, Los Angeles, CA 90071-3101
Phone: (213) 626-8484
Nghirelli@rwglaw.com

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108

Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Brian Ingallinera, Environmental Services Coordinator, *City of Brea*
Claimant Representative
1 Civic Center Circle, Brea, CA 92821
Phone: (714) 990-7672
briani@cityofbrea.net

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814

Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-08

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Cypress, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Cypress

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Christine M. Carson, Attorney, *Aleshire & Wynder, LLP*
2361 Rosecrans Ave, Suite 475, El Segundo, CA 90245-4916
Phone: (310) 527-6660
ccarson@awattorneys.com

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Kamran Dadbeh, *City of Cypress*
5275 Orange Ave, Cypress, CA 90630
Phone: (714) 229-6748
kdadbeh@cypressca.org

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Kirsten Graham, *City of Cypress*
5275 Orange Ave, Cypress, CA 90630
Phone: (714) 229-6748
kgraham@cypressca.org

Peter Grant, City Manager, *City of Cypress*

Claimant Contact
5275 Cypress Ave, Cypress, CA 90630
Phone: (714) 229-6700
pgrant@cypressca.org

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814

Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814

Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Anthony R. Taylor, Attorney, *Aleshire & Wynder, LLP*
2361 Rosecrans Ave, Suite 475, El Segundo, CA 90245-4916
Phone: (310) 527-6660
ataylor@awattorneys.com

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Gonzalo Vazquez, Water Quality Manager, *City of Cypress*
Claimant Representative
5275 Orange Avenue, Cypress, CA 90630
Phone: (714) 229-6752
gvazquez@cypressca.org

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-09

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Huntington Beach, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Huntington Beach

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Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Tom Herbel, City Engineer, *City of Huntington Beach*
Claimant Representative
Public Works Department, 2000 Mail Street PO Box 190, Huntington Beach, CA 92648
Phone: (714) 375-5077
Tom.Herbel@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403

Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660

Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-10

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Newport Beach, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Newport Beach

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Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

John Kappeler, Senior Engineer, *City of Newport Beach*
Claimant Representative
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3218
jkappeler@newportbeachca.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Grace Leung, City Manager, *City of Newport Beach*
Claimant Contact
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3001
gleung@newportbeachca.gov

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*

300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814

Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-11

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Orange, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Orange

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670

Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Rick Otto, City Manager, *City of Orange*
Claimant Contact
300 East Chapman Avenue, Orange, CA 92866
Phone: (714) 744-2222
rotto@cityoforange.org

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660

Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Wayne Winthers, City Attorney, *City of Orange*
Claimant Representative
300 East Chapman Avenue, Orange, CA 92866
Phone: (714) 744-5580
wwinthers@cityoforange.org

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-12

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Seal Beach, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Seal Beach

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Nicholas Ghirelli, Attorney, *Richards Watson Gershon*
355 South Grand Avenue, Suite 4000, Los Angeles, CA 90071-3101
Phone: (213) 626-8484
Nghirelli@rwglaw.com

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Jill Ingram, City Manager, *City of Seal Beach*
Claimant Contact
211 8th Street, Seal Beach, CA 90740
Phone: (562) 431-2527
jingram@sealbeachca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054

Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

David Spitz, Associate Engineer, *City of Seal Beach*
Claimant Representative
211 Eighth Street, Seal Beach, CA 90740
Phone: (562) 431-2527
DSpitz@sealbeachca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*

Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-13

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Anaheim, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Anaheim

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670

Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Bryn Morley, Deputy City Attorney, *City of Anaheim*
Claimant Representative
200 S. Anaheim Blvd., Suite 356, Anaheim, CA 92805
Phone: (714) 765-5169
bmorley@anaheim.net

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660

Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

Chris Zapata, City Manager, *City of Anaheim*
Claimant Contact
200 S. Anaheim Blvd., Suite 733, Anaheim, CA 92805
Phone: (714) 765-5165
CityManager@anaheim.net

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-14

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Chino Hills, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Chino Hills

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Elizabeth Calciano, Assistant City Attorney, *Hensley Law Group*
Claimant Representative
2600 W. Olive Avenue, Suite 500, Burbank, CA 91505
Phone: (818) 333-5120
ecalciano@hensleylawgroup.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814

Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*

17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Benjamin Montgomery, City Manager, *City of Chino Hills*
Claimant Contact
14000 City Center Drive, Chino Hills, CA 91709
Phone: (909) 364-2610
bmontgomery@chinohills.org

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814

Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-15

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Costa Mesa, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Costa Mesa

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Baron Bettenhausen, Deputy City Attorney, *Jones & Mayer Law Firm*
Claimant Representative
3777 N. Harbor Blvd, Fullerton, CA 92835
Phone: (714) 446-1400
bjb@jones-mayer.com

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814

Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Tom Hatch, City Manager, *City of Costa Mesa*
Claimant Contact
77 Fair Drive, Costa Mesa, CA 92626
Phone: (714) 754-5000
thomas.hatch@costamesaca.gov

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814

Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-16

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Garden Grove, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Garden Grove

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Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

James Eggart, *Woodruff,Spradlin & Smart*
Claimant Representative
555 Anton Boulevard, #1200, Costa Mesa, CA 92626-7670
Phone: (714) 415-1062
JEggart@wss-law.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814

Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*

17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660

Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Scott Stiles, City Manager, *City of Garden Grove*
Claimant Contact
11222 Acacia Parkway, Garden Grove, CA 92840
Phone: (714) 741-5100
sstiles@ggcity.org

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814

Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-17

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Laguna Woods, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Laguna Woods

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Jeremy Jungreis, Attorney, *Rutan & Tucker, LLP*
Claimant Representative
611 Anton Boulevard, 14th Floor, Costa Mesa, CA 92626
Phone: (714) 338-1882
jjungreis@rutan.com

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Christopher Macon, City Manager, *City of Laguna Woods*
Claimant Contact
24264 El Toro Road, Laguna Woods, CA 92637
Phone: (714) 639-0500
cmacon@cityoflagunawoods.org

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*

300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814

Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-18

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Lake Forest, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Lake Forest

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Rebecca Andrews, *Best Best & Krieger, LLP*
655 West Broadway, 15th Floor, San Diego, CA 92101
Phone: (619) 525-1300
Rebecca.Andrews@bbklaw.com

Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Ryan Baron, *Best Best & Krieger LLP*
18101 Von Karman Avenue, Suite 1000, Irvine, CA 92612
Phone: (949) 263-2600
ryan.baron@bbklaw.com

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054

Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Debra Rose, City Manager, *City of Lake Forest*
Claimant Contact
25550 Commercentre Drive, Suite 100, Lake Forest, CA 92630

Phone: (949) 461-3400
drose@lakeforestca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Devin Slaven, Environmental Manager, *City of Lake Forest*
Claimant Representative
25550 Commercentre Drive, Suite 100, Lake Forest, CA 92630
Phone: (949) 461-3436
dslaven@lakeforestca.gov

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816

Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-19

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of San Jacinto, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of San Jacinto

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Rebecca Andrews, *Best Best & Krieger, LLP*
655 West Broadway, 15th Floor, San Diego, CA 92101
Phone: (619) 525-1300
Rebecca.Andrews@bbklaw.com

Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Ryan Baron, *Best Best & Krieger LLP*
Claimant Representative
18101 Von Karman Avenue, Suite 1000, Irvine, CA 92612
Phone: (949) 263-2600
ryan.baron@bbklaw.com

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Johanna Dombo, City Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 375-8465
Johanna.Dombo@surfcity-hb.org

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*

c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Rob Johnson, City Manager, *City of San Jacinto*
Claimant Contact
595 S. San Jacinto Ave., Bldg. A, San Jacinto, CA 92583
Phone: (951) 487-7330
rjohnson@sanjacintoca.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814

Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Andres Ramirez, Streets, Parks, and Storm Water Supervisor, *City of San Jacinto*
270 Bissell Place, San Jacinto, CA 92583
Phone: (951) 654-4041
aramirez@sanjacintoca.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816

Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-20

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Santa Ana, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Santa Ana

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

Rebecca Andrews, *Best Best & Krieger, LLP*
655 West Broadway, 15th Floor, San Diego, CA 92101
Phone: (619) 525-1300
Rebecca.Andrews@bbklaw.com

Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Ryan Baron, *Best Best & Krieger LLP*
18101 Von Karman Avenue, Suite 1000, Irvine, CA 92612
Phone: (949) 263-2600
ryan.baron@bbklaw.com

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Craig Foster, Stormwater Coordinator, *City of Santa Ana*
Claimant Representative
20 Civic Center Place, Santa Ana, CA 92702
Phone: (714) 647-5659
cfoster@santa-ana.org

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814

Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Steven Mendoza, Acting City Manager, *City of Santa Ana*
Claimant Contact
20 Civic Center Place, Santa Ana, CA 92702
Phone: (714) 647-5200
Smendoza@santa-ana.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236

Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-21

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Tustin, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Tustin

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

John Buchanan, Finance Director, *City of Tustin*
Claimant Contact
300 Centennial Way, Tustin, CA 92780
Phone: (714) 573-3124
jbuchanan@tustinca.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

James Eggart, *Woodruff,Spradlin & Smart*
Claimant Representative
555 Anton Boulevard, #1200, Costa Mesa, CA 92626-7670
Phone: (714) 415-1062
JEggart@wss-law.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108

Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*

300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814

Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-22

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Villa Park, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Villa Park

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Steve Franks, City Manager, *City of Villa Park*
Claimant Contact
17855 Santiago Blvd, Villa Park, CA 92861
Phone: (714) 998-1500
info@villapark.org

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814

Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Jeremy Jungreis, Attorney, *Rutan & Tucker, LLP*
Claimant Representative
611 Anton Boulevard, 14th Floor, Costa Mesa, CA 92626
Phone: (714) 338-1882
jjungreis@rutan.com

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814

Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-23

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Yorba Linda, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Yorba Linda

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Jeremy Jungreis, Attorney, *Rutan & Tucker, LLP*
Claimant Representative
611 Anton Boulevard, 14th Floor, Costa Mesa, CA 92626
Phone: (714) 338-1882
jjungreis@rutan.com

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403

Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Pulone, City Manager, *City of Yorba Linda*
Claimant Contact
4845 Casa Loma Avenue, Yorba Linda, CA 92886
Phone: (714) 961-7100
mpulone@yorbalindaca.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814

Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-24

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to County of Orange, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: County of Orange

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Rebecca Andrews, *Best Best & Krieger, LLP*
655 West Broadway, 15th Floor, San Diego, CA 92101
Phone: (619) 525-1300
Rebecca.Andrews@bbklaw.com

Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Ryan Baron, *Best Best & Krieger LLP*
18101 Von Karman Avenue, Suite 1000, Irvine, CA 92612
Phone: (949) 263-2600
ryan.baron@bbklaw.com

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*

Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Kim-Anh Le, Deputy Controller, *County of San Mateo*
555 County Center, 4th Floor, Redwood City, CA 94063
Phone: (650) 599-1104
kle@smcgov.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Geoffrey Neill, Senior Legislative Analyst, Revenue & Taxation, *California State Association of Counties (CSAC)*
1100 K Street, Suite 101, Sacramento, CA 95814

Phone: (916) 327-7500
gneill@counties.org

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Patricia Pacot, Accountant Auditor I, *County of Colusa*
Office of Auditor-Controller, 546 Jay Street, Suite #202 , Colusa, CA 95932
Phone: (530) 458-0424
ppacot@countyofcolusa.org

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Tracy Sullivan, Legislative Analyst, *California State Association of Counties (CSAC)*
1100 K Street, Suite 101, Suite 101, Sacramento, CA 95814
Phone: (916) 327-7500
tsullivan@counties.org

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927

Phone: (916) 797-4883
dwa-renee@surewest.net

Julia Woo, Deputy County Counsel, *County of Orange*
Claimant Representative
333 West Santa Ana Blvd, Suite 407, Santa Ana, CA 92701
Phone: (714) 834-6046
julia.woo@coco.ocgov.com

Eric Woolery, Auditor-Controller, *County of Orange*
Claimant Contact
12 Civic Center Plaza, Room #200, Santa Ana, CA 92702
Phone: (714) 834-2450
eric.woolery@ac.ocgov.com

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-25

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Grand Terrace, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Grand Terrrace

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Christine M. Carson, Attorney, *Aleshire & Wynder, LLP*
2361 Rosecrans Ave, Suite 475, El Segundo, CA 90245-4916
Phone: (310) 527-6660
ccarson@awattorneys.com

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

G. Harold Duffey, City Manager, *City of Grand Terrace*
Claimant Contact
22795 Barton Road, Grand Terrace, CA 92313-5295
Phone: (909) 824-6621
hduffey@grandterrace-ca.gov

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Adrian Guerra, City Attorney, *Aleshire & Wynder, LLP*
Claimant Representative
18881 Von Karman Ave., Suite 1700, Irvine, CA 92612

Phone: (949) 223-1170
aguerra@awattorneys.com

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814

Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-26

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Irvine, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Irvine

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Jeffrey Melching, City Attorney, *Rutan & Tucker, LLP*
Claimant Representative
611 Anton Boulevard, Suite 1400, Costa Mesa, CA 92626
Phone: (714) 641-5100
JMelching@rutan.com

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403

Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

John Russo, City Manager, *City of Irvine*
Claimant Contact
1 Civic Center Plaza, PO Box 19575, Irvine, CA 92623-9575
Phone: (949) 724-6249
JRusso@cityofirvine.org

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814

Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-27

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Placentia, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Placentia

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

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Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Damien Arrula, City Administrator, *City of Placentia*
Claimant Contact
401 E. Chapman Avenue, Placentia, CA 92870
Phone: (714) 993-8171
darrula@placentia.org

Baron Bettenhausen, Deputy City Attorney, *Jones & Mayer Law Firm*
Claimant Representative
3777 N. Harbor Blvd, Fullerton, CA 92835
Phone: (714) 446-1400
bjb@jones-mayer.com

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864

Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 323-0706
gcarlos@sco.ca.gov

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108

Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*

300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814

Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov

COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 1/28/20

Claim Number: 17-TC-28

Matter: Water Code Section 13383(a) Phase I MS4 Trash Order Issued to City of Rialto, Santa Ana Regional Water Quality Control Board, Effective June 2, 2017

Claimant: City of Rialto

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

Socorro Aquino, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 322-7522
SAquino@sco.ca.gov

Cindy Black, City Clerk, *City of St. Helena*
1480 Main Street, St. Helena, CA 94574
Phone: (707) 968-2742
ctzafopoulos@cityofsthelena.org

Allan Burdick,
7525 Myrtle Vista Avenue, Sacramento, CA 95831
Phone: (916) 203-3608
allanburdick@gmail.com

J. Bradley Burgess, *MGT of America*
895 La Sierra Drive, Sacramento, CA 95864
Phone: (916)595-2646
Bburgess@mgtamer.com

Evelyn Calderon-Yee, Bureau Chief, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-5919
ECalderonYee@sco.ca.gov

Gwendolyn Carlos, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816

Phone: (916) 323-0706
gcarlos@sco.ca.gov

Christine M. Carson, Attorney, *Aleshire & Wynder, LLP*
2361 Rosecrans Ave, Suite 475, El Segundo, CA 90245-4916
Phone: (310) 527-6660
ccarson@awattorneys.com

Annette Chinn, *Cost Recovery Systems,Inc.*
705-2 East Bidwell Street, #294, Folsom, CA 95630
Phone: (916) 939-7901
achinncrs@aol.com

Carolyn Chu, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8326
Carolyn.Chu@lao.ca.gov

Michael Coleman, *Coleman Advisory Services*
2217 Isle Royale Lane, Davis, CA 95616
Phone: (530) 758-3952
coleman@muni1.com

Donna Ferebee, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
donna.ferebee@dof.ca.gov

Adam Fischer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 320-6363
afischer@waterboards.ca.gov

Jennifer Fordyce, Assistant Chief Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, 22nd floor, Sacramento, CA 95814
Phone: (916) 324-6682
Jennifer.Fordyce@waterboards.ca.gov

Rod Foster, City Administrator, *City of Rialto*
150 South Palm Avenue, Rialto, CA 92376
Phone: (909) 421-7246
rfoster@rialtoca.gov

Fred Galante, City Attorney, *Aleshire & Wynder, LLP*
Claimant Representative
18881 Von Karman Ave., Ste. 1700, Irvine, CA 92612
Phone: (949) 223-1170
fgalante@awattorneys.com

Susan Geanacou, *Department of Finance*
915 L Street, Suite 1280, Sacramento, CA 95814
Phone: (916) 445-3274
susan.geanacou@dof.ca.gov

Dillon Gibbons, Legislative Representative, *California Special Districts Association*
1112 I Street Bridge, Suite 200, Sacramento, CA 95814
Phone: (916) 442-7887
dillong@csda.net

Catherine George Hagan, Senior Staff Counsel, *State Water Resources Control Board*
c/o San Diego Regional Water Quality Control Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone: (619) 521-3012
catherine.hagan@waterboards.ca.gov

Heather Halsey, Executive Director, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
heather.halsey@csm.ca.gov

Sunny Han, Project Manager, *City of Huntington Beach*
2000 Main Street, Huntington Beach, CA 92648
Phone: (714) 536-5907
Sunny.han@surfcity-hb.org

Chris Hill, Principal Program Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814
Phone: (916) 445-3274
Chris.Hill@dof.ca.gov

Edward Jewik, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-8564
ejewik@auditor.lacounty.gov

Anita Kerezsi, *AK & Company*
2425 Golden Hill Road, Suite 106, Paso Robles, CA 93446
Phone: (805) 239-7994
akcompanysb90@gmail.com

Lisa Kurokawa, Bureau Chief for Audits, *State Controller's Office*
Compliance Audits Bureau, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 327-3138
lkurokawa@sco.ca.gov

Michael Lauffer, Chief Counsel, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
michael.lauffer@waterboards.ca.gov

Alison Leary, Deputy General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8200
aleary@cacities.org

Erika Li, Program Budget Manager, *Department of Finance*
915 L Street, 10th Floor, Sacramento, CA 95814
Phone: (916) 445-3274
erika.li@dof.ca.gov

Jill Magee, Program Analyst, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
Jill.Magee@csm.ca.gov

Corrie Manning, Assistant General Counsel, *League of California Cities*
1400 K Street, Suite 400, Sacramento, CA 95814

Phone: (916) 658-8200
cmanning@cacities.org

Jane McPherson, Financial Services Director, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
JmcPherson@oceansideca.org

Michelle Mendoza, *MAXIMUS*
17310 Red Hill Avenue, Suite 340, Irvine, CA 95403
Phone: (949) 440-0845
michellemendoza@maximus.com

Meredith Miller, Director of SB90 Services, *MAXIMUS*
3130 Kilgore Road, Suite 400, Rancho Cordova, CA 95670
Phone: (972) 490-9990
meredithcmiller@maximus.com

Lourdes Morales, Senior Fiscal and Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8320
Lourdes.Morales@LAO.CA.GOV

Debra Morton, Manager, Local Reimbursements Section, *State Controller's Office*
Local Government Programs and Services Division, Bureau of Payments, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: (916) 324-0256
DMorton@sco.ca.gov

Andy Nichols, *Nichols Consulting*
1857 44th Street, Sacramento, CA 95819
Phone: (916) 455-3939
andy@nichols-consulting.com

Arthur Palkowitz, *Artiano Shinoff*
2488 Historic Decatur Road, Suite 200, San Diego, CA 92106
Phone: (619) 232-3122
apalkowitz@as7law.com

Johnnie Pina, Legislative Policy Analyst, *League of Cities*
1400 K Street, Suite 400, Sacramento, CA 95814
Phone: (916) 658-8214
jpina@cacities.org

Jai Prasad, *County of San Bernardino*
Office of Auditor-Controller, 222 West Hospitality Lane, 4th Floor, San Bernardino, CA 92415-0018
Phone: (909) 386-8854
jai.prasad@atc.sbcounty.gov

Mark Rewolinski, *MAXIMUS*
808 Moorefield Park Drive, Suite 205, Richmond, VA 23236
Phone: (949) 440-0845
markrewolinski@maximus.com

David Rice, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5161
davidrice@waterboards.ca.gov

Teresita Sablan, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814
Phone: (916) 341-5174
Teresita.Sablan@waterboards.ca.gov

Theresa Schweitzer, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3140
tschweitzer@newportbeachca.gov

Camille Shelton, Chief Legal Counsel, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
camille.shelton@csm.ca.gov

Carla Shelton, *Commission on State Mandates*
980 9th Street, Suite 300, Sacramento, CA 95814
Phone: (916) 323-3562
carla.shelton@csm.ca.gov

Natalie Sidarous, Chief, *State Controller's Office*
Local Government Programs and Services Division, 3301 C Street, Suite 740, Sacramento, CA 95816
Phone: 916-445-8717
NSidarous@sco.ca.gov

Michelle Skaggs Lawrence, City Manager, *City of Oceanside*
300 North Coast Highway, Oceanside, CA 92054
Phone: (760) 435-3055
citymanager@oceansideca.org

Hope Smythe, Executive Officer, *Santa Ana Regional Water Quality Control Board*
3737 Main Street, Suite 500, Riverside, CA 92501-3348
Phone: (951) 782-4493
Hope.Smythe@waterboards.ca.gov

Eileen Sobeck, Executive Director, *State Water Resources Control Board*
1001 I Street, 22nd Floor, Sacramento, CA 95814-2828
Phone: (916) 341-5183
Eileen.Sobeck@waterboards.ca.gov

Jim Spano, Chief, Mandated Cost Audits Bureau, *State Controller's Office*
Division of Audits, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 323-5849
jspano@sco.ca.gov

Dennis Speciale, *State Controller's Office*
Division of Accounting and Reporting, 3301 C Street, Suite 700, Sacramento, CA 95816
Phone: (916) 324-0254
DSpeciale@sco.ca.gov

Joe Stephenshaw, Director, *Senate Budget & Fiscal Review Committee*
California State Senate, State Capitol Room 5019, Sacramento, CA 95814
Phone: (916) 651-4103
Joe.Stephenshaw@sen.ca.gov

Brittany Thompson, Budget Analyst, *Department of Finance*
Local Government Unit, 915 L Street, Sacramento, CA 95814

Phone: (916) 445-3274
Brittany.Thompson@dof.ca.gov

Jolene Tollenaar, *MGT of America*
2251 Harvard Street, Suite 134, Sacramento, CA 95815
Phone: (916) 243-8913
jolenetollenaar@gmail.com

Evelyn Tseng, *City of Newport Beach*
100 Civic Center Drive, Newport Beach, CA 92660
Phone: (949) 644-3127
etseng@newportbeachca.gov

Brian Uhler, Principal Fiscal & Policy Analyst, *Legislative Analyst's Office*
925 L Street, Suite 1000, Sacramento, CA 95814
Phone: (916) 319-8328
Brian.Uhler@LAO.CA.GOV

Emel Wadhwani, Senior Staff Counsel, *State Water Resources Control Board*
Office of Chief Counsel, 1001 I Street, Sacramento, CA 95814
Phone: (916) 322-3622
emel.wadhwani@waterboards.ca.gov

Renee Wellhouse, *David Wellhouse & Associates, Inc.*
3609 Bradshaw Road, H-382, Sacramento, CA 95927
Phone: (916) 797-4883
dwa-renee@surewest.net

Hasmik Yaghobyan, *County of Los Angeles*
Auditor-Controller's Office, 500 W. Temple Street, Room 603, Los Angeles, CA 90012
Phone: (213) 974-9653
hyaghobyan@auditor.lacounty.gov